### Capital Investment Now

#### Private Capital Investment at Record Levels Now

Cambridge Systematics ‘7

Cambridge Systematics is a research and policy organization dedicated to providing analysis and solutions to transportation issues. “National Rail Freight Infrastructure

Capacity and Investment Study,” <http://www.aar.org/~/media/aar/Files/natl_freight_capacity_study.ashx>, September

The AAR estimates that the Class I railroads will spend approximately $1.9 billion in 2007 for expansion of capacity through the construction of new road- way and structures. This is the highest level of investment for expansion in recent years and reflects a steady increase in investment in expansion of roadway and structures. The Class I railroads invested $1.1 billion in expansion of road- way and structures in 2005. The Class I railroads invested $1.4 billion in infra- structure expansion in 2006. This was in addition to an expenditure of $17.9 billion for renewal of roadway, structures, and equipment and additions to loco- motives and freight cars. The average annual investment in infrastructure expan- sion over the three year period from 2005 to 2006 was $1.5 billion per year.21 As these numbers demonstrate, rail transportation is capital intensive, requiring high levels of spending on infrastructure such as track, bridges, and signals; locomotives, freight cars, and maintenance equipment; and information technol- ogy. From 1996 through 2005, Class I railroad capital expenditures averaged 17 percent of revenue. (The comparable figure for the average U.S. manufacturer was 3 percent of revenue.) Railroad capital expenditures for ties alone have ex- ceeded $1 billion every year since 2003, and spending for rail has been even higher.

### Railroads Investing Now

#### Railroads Doing Own Capital Capacity Expansions Now

Cambridge Systematics ‘7

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Capacity and Investment Study,” <http://www.aar.org/~/media/aar/Files/natl_freight_capacity_study.ashx>, September

As these numbers demonstrate, rail transportation is capital intensive, requiring high levels of spending on infrastructure such as track, bridges, and signals; locomotives, freight cars, and maintenance equipment; and information technology. From 1996 through 2005, Class I railroad capital expenditures averaged 17 percent of revenue. (The comparable figure for the average U.S. manufacturer was 3 percent of revenue.) Railroad capital expenditures for ties alone have exceeded $1 billion every year since 2003, and spending for rail has been even higher. Even though the railroads must invest heavily in infrastructure, the railroads have had substantial surplus capacity in the rail network for many years. This has enabled them to absorb traffic growth with relatively modest additional capital commitments to expand infrastructure. With this surplus capacity largely absorbed by two decades of growth and with major traffic increases in the past few years, an increasing portion of the capital investment in roadway and structures has been devoted to capacity expansion. And with traffic growth through 2035 expected to be significant, increasing amounts of capital will need to be devoted to expansion.

### No Technology for Electrification

#### **Technology Doesn’t Exist for Electrification**

Boyd 9

(John D Boyd, Associate Editor on Railroads, Apr 13, 2009 "Challenges loom for electric ideas" The Journal of Commerce http://www.joc.com/rail-intermodal/challenges-loom-electric-ideas)

BNSF Railway is finding that if U.S. freight railroads want to run electric trains, they face big challenges in how to shift out of their current all-diesel locomotive fleets. Matthew K. Rose, BNSF’s chairman, president and CEO, said his company has been talking with both major U.S. locomotive manufacturers about the options. He did not name them, but the U.S. suppliers of big cross-country freight train engines are GE Transportation and Electro Motive Diesel. In recent months, Rose said, BNSF officials have been in “conversations with the locomotive manufacturers around looking at … what would an integration path for electrification be?” From a technology standpoint, it is “absolutely” doable, he said, especially if BSNF wanted to simply buy all-electric freight engines. BNSF appears to prefer a dual-mode power unit that can burn diesel when it needs to, but operate on electricity when parts of the track are linked to the transmission grid. Right now, that does not exist for freight systems. Some Northeast intercity passenger trains use dual-mode engines, but builders say those are lower-horsepower units than freight would need and so a new freight-specific model would need to be developed. Rose said running electric-only engines on electrified track sections would either mean changing out locomotives when a train reaches that area, or converting large sections of the network and equipment all at once. “We’re really concerned about the thought of having to do a total turnover, changeover, so we’re really convinced you have to start at least with a dual locomotive,” he told The Journal of Commerce. Rose said that “yes, that locomotive can be developed. No, it’s not in widespread use anywhere in the world and, yes, it’ll be a lot more expensive than either a pure diesel locomotive or certainly a lot more than just an electrified locomotive. So we’re thinking through that, and again having some conversations.”

### Traffic Congestion Not Key

#### Your Highway congestion arguments are untrue-wrong conclusions

Dumbaugh 12 (Eric, professor of urban planning, “Rethinking the economics of Traffic Conmgestion”, 6/1/12, http://www.theatlanticcities.com/commute/2012/06/defense-congestion/2118/ Accessed: 7/2/12

With a few notable exceptions, transportation planning practice in the United States is focused on managing or eliminating traffic congestion. Regardless of whether planners are advocating for highway infrastructure to improve level-of-service, or transit projects intended to “get cars off the road,” the underlying assumption is that congestion relief is an unmitigated good. Such arguments are often based on the idea that traffic congestion and vehicle delay are bad for the economy. According to the Texas Transportation Institute, vehicle delay costs Americans $115 billion in wasted fuel and time each year. The common interpretation of such statistics is that our cities and regions would be so much more economically productive if only we could eliminate the congestion that occurs on urban streets. As Jane Jacobs has observed, city economies generate the resources needed to solve city problems. But this begs the question: is traffic congestion really a drag on the economy? Economies are measured not in terms of vehicle delay or the amount of travel that people do, but in terms of the dollar value of the goods and services that they produce. If it is true that congestion is detrimental to a region’s economy, then one would expect that people living in areas with low levels of traffic congestion would be more economically productive, on a per capita basis, than those in areas with high levels of congestion. This is a testable assertion. With the help of my research assistant Wenhao Li, I sought to determine whether vehicle delay had a negative effect on urban economies. I combined TTI’s data on traffic delay per capita with estimates of regional GDP per capita, acquired from the U.S. Bureau of Economic Analysis. I used 2010 data for both variables, converted them to their natural logs, and modeled them using regression analysis. And what did I find? As per capita delay went up, so did GDP per capita. Every 10 percent increase in traffic delay per person was associated with a 3.4 percent increase in per capita GDP. For those interested in statistics, the relationship was significant at the 0.000 level, and the model had an R2 of 0.375. In layman’s terms, this was statistically-meaningful relationship. Such a finding seems counterintuitive on its surface. How could being stuck in traffic lead people to be more productive? The relationship is almost certainly not causal. Instead, regional GDP and traffic congestion are tied to a common moderating variable - the presence of a vibrant, economically-productive city. And as city economies grow, so too does the demand for travel. People travel for work and meetings, for shopping and recreation. They produce and demand goods and services, which further increases travel demand. And when the streets become congested and driving inconvenient, people move to more accessible areas, rebuild at higher densities, travel shorter distances, and shift travel modes. Stated another way, people adapt to congested environments. Because cities provide greater access to job opportunities than do rural areas, as well as wages that are more than 30 percent higher than their non-metropolitan counterparts they have a powerful economic incentive to do so. Fortunately for our cities and their economies, urban environments are precisely what is sought by the millennial generation. 88 percent of millennials report that they would prefer to live in urban environments, and they are already [driving less and riding transit more than their Gen X and boomer counterparts](http://blogs.wsj.com/developments/2011/01/13/no-mcmansions-for-millennials/). Indeed, many millennials view driving as a vice, with 55 percent indicating that they have [made a deliberate effort to reduce the amount of driving that they do](http://www.slideshare.net/Zipcar_Inc/millennial-slide-share-final.). They are also leading a surge in cycling in cities like Seattle, Minneapolis, Denver, and Washington, D.C., all of which have [seen their share of bike commuting double over the last decade.](https://public.sheet.zoho.com/public/bikeleague/2010-bike-commuters-all-places-1) These trends are of [great concern to the auto industry](http://www.nytimes.com/2012/03/23/business/media/to-draw-reluctant-young-buyers-gm-turns-to-mtv.html?pagewanted=all).

### No Short Term Solvency

#### There are massive issues that have to be addressed before electrification is possible

Hay, 2003

Hay, W. W. AREMA, Railway Engineering. “Practical Guide to Railway Engineering.” Railway Electrification. 2003. http://www.arema.org/eseries/scriptcontent/custom/e\_arema/Practical\_Guide/PGChapter9.pdf

The electrification of a section of existing mainline cannot be undertaken without considering the requirements that the electric locomotives, substations, overhead or third rail power distribution systems and traction return system will place on the existing rail infrastructure. The more significant issues are noted below: Tracks may need to be upgraded, including new track work or re-alignment. Sites must be found and real estate acquired for substations. In rights-of-way with restrictive width, the location of the system-wide ductbank requires coordination with track drainage, the foundations for OCS poles and emergency walkways. In all cases, maintenance access must be provided. If DC traction is used, the effects of electrolytic corrosion due to leakage (stray) currents must be mitigated. Additional clearance may need to be provided in tunnels and at bridges. Existing civil structures may have insufficient clearance to accommodate the proposed electrification system. It may be necessary to lower tracks through overhead crossing bridges. New bridges resulting from grade-crossing elimination will need to be built with adequate electrical clearance. Future widening of existing overhead bridges must be considered. Tunnels may be suitable for electrification, or may require costly remedial work, enlargement or “daylighting.” Integration of the electrification support structures with existing station canopies must be considered. Station canopies that project over platform edges may need modification. Where OCS poles cannot be installed for lack of clearance, attachments, such as wall brackets, will need to be added to civil structures. Pictured at the right is an example of an OCS cantilever attachment to an overhead structure. Signals and communication systems will need to be replaced or upgraded. Because electric traction systems use the same running rails for traction return current, it is necessary for the two electrical systems to be electrically isolated. The signal circuits need to be “immunized” from the traction power circuits. Grounding and bonding of exposed metals is necessary to protect the public from electrical hazards, as well as insuring that there is no interference with the signals and communications systems. A central location will be needed to supervise the power system. SCADA, pilot wires or a relaying system must send information to a central point to insure power is being supplied to the system when necessary.

### Electrification Can’t Solve: Blackouts

#### Can’t solve- electric grid blackoutsTverberg 10, Gail, M. S. from the University of Illinois, Chicago in Mathematics<http://www.theoildrum.com/search/apachesolr_search/Alan%20Drake>Quite a few people believe that if there is a decline in oil production, we can make up much of the difference by increasing our use of electricity--more nuclear, wind, solar voltaic, geothermal or even coal. The problem with this model is that it assumes that our electric grid will be working well enough for this to happen. It seems to me that there is substantial doubt that this will be the case. From what I have learned in researching this topic, I expect that in the years ahead, we in the United States will have more and more problems with our electric grid. This is likely to result in electrical outages of greater and greater durations. The primary reason for the likely problems is the fact that in the last few decades, the electric power industry has moved from being a regulated monopoly to an industry following more of a free market, competitive model. With this financing model, electricity is transported over long distances, as electricity is bought and sold by different providers. Furthermore, some of the electricity that is bought and sold is variable in supply, like wind and solar voltaic. A substantial upgrade to the electrical grid is needed to support all of these activities, but our existing financing models make it very difficult to fund such an upgrade. If frequent electrical outages become common, these problems are likely to spill over into the oil and natural gas sectors. One reason this may happen is because electricity is used to move oil and natural gas through the pipelines. In addition, gas stations use electricity when pumping gasoline, and homeowners often have natural gas water heaters and furnaces with electric ignition. These too are likely to be disrupted by electrical power outages.

#### Electric rails fail—cost, supply failures, ugliness, harms humans

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

The electricity for the locomotives has to be produced. In case the railway does not own power plants it has to buy the electricity, it is therefore dependent on utilities and the prices they set and that can therefore be costly (24). In the author's opinion there is little difference in buying the electricity or diesel; prices may be more stable for electricity as it can be produced out of a mix of sources see earlier.

The disadvantages of railway electrification are mainly due to the additional infrastructure. The reliability of the electric system is more affected by supply failures (compared to a diesel railway) as usually a wide region and many trains are affected. The author considers the cost and the visual impact as the most sever[e], except for the possible negative effect on humans, which has to be researched further.

### Electrification Hurts Revenue

#### Doesn’t solve—rail lines must be closed to electrify and result in revenue losses

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

The electrical transmission system has to be maintained, that is an additional cost which would not occur with diesel traction. The cost is given at an annual rate of 0.5% of the initial capital cost for electrification (51), hence for the Birmingham - London line example form above GBP 3.6 million. American Railroads consider that the overhead line maintenance offsets all locomotive maintenance cost savings (24). Maintenance of infrastructure involves often the closure of the railway line, therefore no trains can operate on the line which may cause revenue losses to train operators (3).. .

### Electrification Can’t Solve: Weak Grid

#### Electrified rail cannot work with renewables – poor electrical grid

Tverberg 10, Gail, M. S. from the University of Illinois, Chicago in Mathematics
<http://www.theoildrum.com/search/apachesolr_search/Alan%20Drake>
It is hard to know where the impact of intermittent electricity would end. For example, electric power plants currently get their fuel from very long distances. Georgia imports coal from Wyoming to run its power plants. Most uranium is imported from overseas. It is possible that some of these supply lines could be interrupted as an indirect result of the electricity disruptions, further disrupting electric power. The interconnections of electricity with petroleum, natural gas, and other operations could be the topic of another post. If we cannot get the electrical grid upgraded, it seems like we will need to downgrade our expectations for applications such as electrified rail and plug-in electric hybrid cars. These will work much less well if there are frequent electric outages in much of the country. We may also need to downgrade our expectation for newer renewables because of the intermittent nature of their output, and the inability of local grids to handle this type of input. Efforts at higher efficiency may also be hindered, if we are unable to make the grid "smart".

#### Electrified rails can’t solve long term—don’t work in winter

 Edwards, 10 (Tom Edwards, staff writer, December 12, 2010, BBC, “Why do south London trains suffer most in the snow?”, <http://www.bbc.co.uk/blogs/mindthegap/2010/12/who_do_south_london_trains_suf.html>)

Why are trains in south London more affected by snow than those elsewhere? If you think it's train companies in south London that are the worst affected by the weather - you'd be right. And there is I'm told a technical reason for this. In south London the companies like Southern Railway, Southeastern and South West Trains have to operate using the "third rail system". That is, the electricity is transmitted to the train using an electrified third rail that the train picks up through a bit of metal called a shoe. So, while Network Rail have been running "ghost trains" (empty trains) and de-icing trains through the night there comes a point when it doesn't help. When the snow and ice hits, if the conductor third rail is cold as soon as snow hits it, it freezes. That means there's an insulating layer of ice between the shoe and the rail. Southeastern have told me the trains automatically shut down to prevent "arcing" of electricity - that could damage electrics and is potentially dangerous.

#### Can’t solve—entire networks have gone out

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

Electricity has to be generated at the same time as it is needed, that can lead to problems. In case the power supply fails several lines and hence many trains can be affected, that happened for example in Switzerland (56) where on the whole network no train moved for about 12 hours, 1,500 trains were affected. The reason was a failure in the power transmission to the railway network. It is very unlikely in the author's opinion that if the network would have been run with diesel trains that this would happen.

### AT: Hazmat Risks

#### Railroads are safe for hazardous material transport

Barkan 2009

(Christopher P.L. Barkan, 2009, Associate Professor Director - Railroad Engineering Program University of Illinois at Urbana-Champaign "Railroad Derailment Factors Affecting Hazardous Materials Transportation Risk" http://ict.illinois.edu/railroad/cee/pdf/Barkan\_et\_al\_2009.pdf)

The U.S. railroad mainline accident rate has declined by more than 75% since 1980 (Figure 1). The rate of releases caused by hazardous materials accidents has declined by nearly 90% (7-5). The improvements are the result of major capital investments in infrastructure and equipment, improved safety design of tank cars, employee training, and development and implementation of new technology (4, 5). Most safety improvements occurred in the 1980s. Although the downward trend in the mainline accident rate continued through the 1990s, albeit at a low rate, it has leveled off in recent years (Figure 1). Major accident-caused hazardous materials releases have declined to such an extent that identifying and implementing further safety improvements have become more challenging because less empirical information exists on the causes contributing to the greatest risks.

### Tax Credit/Incentives CP Solves

#### Competitive tax credits cause electrification transition

Drake 8, Alan, consulting engineer, “Multiple Birds-One Silver BB: A synergistic set of solutions focused on Electrified Railroads, 7/15/08, http://www.theoildrum.com/node/4301 Accessed: 6/26/12

Politics is the art of the possible. If only minimal funding of $1 billion/year or so is possible to support electrified rail, despite the enumerated benefits, then leverage is needed. Most states are served by one or two Class I railroads, making a local monopoly or duopoly. Regionally, most of the Western USA is served by Union Pacific and/or BN-SF and the Eastern USA by Norfolk Southern and CSX. Canadian Pacific, Canadian National and Kansas City Southern provide a third Class I alternative in a few states. This lack of competition stifles innovation. However, once one member of a duopoly successfully innovates, the other member is compelled to match them. The issue then is to ignite the spark and get at least two of the Class I railroads (one each in the East and West) to make the first move. Such a “chain reaction” will not result in the fastest possible electrification and expansion, but it will eventually get us there. The incentives given to the first six nuclear power plants are a model for the “chain reaction” needed. Applied to railroads, this would give incentives to the first railroad to electrify (East & West) and none for the second or third. Of course, if two or three railroads electrify at about the same time (hopefully), the incentives would be split. One way, of many, to ignite this spark would be to grant $1 billion/year (inflation adjusted) for ten years as a 25% tax credit for electrification, with no more than 66% going to either East or West of the Mississippi River. These benefits would be granted when placed into commercial service, then – and this is a crucial point - put on both a “first come, first served” and accrued basis. To illustrate if $3 billion worth of tax credits are issued in 2011 for $12 billion of electrification, which would be $2 billion in excess of that years tax credit budget, the overage would be issued tax credits good for the 2012 and 2013 tax years. Any work completed in 2012 would be issued tax credits usable in 2014 and beyond until the tax credits are exhausted. This accrual of limited tax benefits would place a premium on being first to complete electrification - which serves public policy goals admirably. And railroads that failed to join the rush to electrify would be forced by competitive pressures to electrify without tax incentives at a later date. Ten years of $1 billion (2008 $) of 25% tax credits would support $40 billion worth (2008 $) of electrification. $40 billion of electrification should electrify about 16,000 miles of US rail lines.

#### Declining Incentives Key—Solves Railroad

Drake 8, Alan, consulting engineer, “Multiple Birds-One Silver BB: A synergistic set of solutions focused on Electrified Railroads, 7/15/08, http://www.theoildrum.com/node/4301 Accessed: 6/26/12

The USA needs to start electrifying our main line railroads. The railroads can do it, or utilities can do it and sell “Power at the Wire” to the railroads, and use the railroad ROWs as transmission corridors, strengthening our electrical grid and providing Non-Oil Transportation. The United States of America needs electrified rail done as soon as possible, given the growing crisis in energy and climate. The “First Step (Small)” is clearly inadequate to the looming crisis. The preferred alternative is to get everybody to electrify everything as fast as possible. The author believes that a fixed incentive would create delay and cautious evaluation in the early years, with a mad rush as the incentives expiration nears. A carefully timed decline in incentives, rewarding first movers the most but still providing reduced incentives for laggards, would have the greatest public policy benefit, i.e. the most electrified miles ASAP. We also need to increase capacity, speed and reliability of rail shipments to better serve the economy and to attract more shipments from trucks.

#### Targeted Tax Incentives Solve The Aff, Get Rails Built

McCulloch ‘10

Rob McCulloch is Senior Policy and Legislative Advocate, BlueGreen Alliance. Grow the rail network through incentives. Grow the Rail Network Through Incentives.. http://transportation.nationaljournal.com/2010/10/talkin-about-a-railvolution.php , OCTOBER 15, 2010

While track space may not be unlimited, America’s rail network has room to grow. Expanding interstate rail capacity would move more passengers and freight more efficiently, create good, green jobs to support a rebounding American economy and reduce pollution from the transportation sector. More capacity would benefit passenger and freight operations simultaneously, by improving operations on this shared network. Rail improvements, unlike other infrastructure investments, are largely accomplished with private capital, so government could incentivize investment without busting federal and state budgets. Tax credits reduce the cost of private investment, helping economically viable projects get built sooner and accelerating employment creation and public benefits. By targeting specific outcomes - such as generating levels of employment or expanding transportation system capabilities - policymakers can limit the scope and duration of tax credits to achieve the intended effect. Furthermore, tying investments to outcomes would help remove much of the risk of wasting incentives on economically unjustified projects.

### Tax Credit/Incentives CP Solves Electrification

#### Declining tax credit causes transition to electrified rail

Drake 8, Alan, consulting engineer, “Multiple Birds-One Silver BB: A synergistic set of solutions focused on Electrified Railroads, 7/15/08, http://www.theoildrum.com/node/4301 Accessed: 6/26/12

A declining investment tax credit - An example, a 25% investment tax credit for electrification, given only when the electrification infrastructure is operational, that is flat at 25% for the first 30 months and then declines by 1% a quarter for four years to 9% and then continues at that level for several years. The electrification tax credit would be available to either railroads or electric utilities. Since the major oil savings come from shifting truck freight to rail, increasing capacity by just 15% from electrification is clearly inadequate. Perhaps half of this tax credit (12.5%) could be offered for double tracking, improved signals and other measures that increase rail capacity, speed and improve reliability on electrified rail lines. No tax credit should be given for improvements to rail lines that are not electrified. A slightly slower decline in the investment tax credit could be justified for these improvements. Perhaps 12.5% for five years, then a half percent/year decline to 9%

### Tax Credit/Incentives Don’t Link to Politics

#### Incentives Solve Your Aff, Don’t Damage Revenue, Don’t Link to Politics

McCulloch ‘10

Rob McCulloch is Senior Policy and Legislative Advocate, BlueGreen Alliance. Grow the rail network through incentives. Grow the Rail Network Through Incentives.. http://transportation.nationaljournal.com/2010/10/talkin-about-a-railvolution.php , OCTOBER 15, 2010

While tax incentives may offset government revenues, U.S. Department of Commerce data suggest that every $1 of rail infrastructure investment generates more than $3 in economic output. Such tax credits could be targeted to support rail capacity expansion specifically, which in recent years represents about 25 percent of total rail capital investment. BlueGreen Alliance published a report in May 2010 titled “Full Speed Ahead: Creating Jobs Through Freight Rail Expansion” which estimated nearly 8,000 ‘green’ jobs and a total impact of 12,000 and 26,000 jobs are generated or sustained per billion dollars of capital investment. Right now, Congress is considering two bills that would provide tax incentives for rail investment: H.R. 1806 would stimulate national rail expansion and H.R. 1132 would benefit short line and regional rail improvements. Hundreds of bi-partisan representatives have co-sponsored both of these bills, which would create jobs and strengthen our economy. Congress should move beyond election year politics and pass this legislation with prevailing wage provisions in order to create good jobs, and move more freight while reducing our nation’s dependence on foreign oil and pollution.

#### Electric rail poses safety risks

Dutta 07

(A.K. Dutta, inspector for the Indian Railways, 2007 http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CFMQFjAA&url=http%3A%2F%2Fwww.intlrailsafety.com%2FGoa%2FPublication%2FAnil%2520Kumar%2520Dutta%2520Paper.doc&ei=86jzT9blE4Gs8QS4xtHpBg&usg=AFQjCNFrFPi3U-cWK7FU3woiLsfnd205hw&sig2=5F93rcSHI1-6VRx\_I1c2Vw)

Rail transportation like other aspects of life has seen intense dependence on electricity to improve its efficiency, safety & quality of service. With the stress on prevention of accident on Indian Railways, avoidance of Electrical accidents is one critical area which has been addressed in this paper. Considering the destructive and damaging power of electricity if not handled properly, legislations, rules and regulations have been framed to ensure public safety from electrical installations, equipments etc. Unfortunately many loose ends exist as on date when it comes to the issue of implementation of various statutory provisions not only to Rail Transport sector but many other sectors pertaining to electrical safety as intended by legislation for public safety. This paper is an effort to bring out the obligations and responsibilities stipulated in these statutory Regulations and asses the level of implementation at present as also identify the areas where implementation needs to be streamlined and suggest the modalities for strengthening the aspect of public safety, as part of corporate responsibility.

#### **Obstacle to private-public partnerships**

Allen et al 2008

(Sarah Allen, Kendra Kelson, Hayden Migl, Rodney Schmidt, David Shoemaker, and Heather Thompson, The Bush School of Government and Public Service, May 2008 "Current Trends and Future Challenges in the Freight Railroad Industry Balancing Private Industry Interests and the Public Welfare")

Increasing capacity is not a simple process. It can be costly and slow, which makes it difficult for railroads to adjust quickly to changes in demand for freight transportation. An example of a typical capacity project on many railroads is adding an additional siding on a single track route. According to Norfolk Southern executive James McClellan, such a siding can cost in excess of $10 million. Because capacity expansion projects are costly, railroads are highly selective in pursuing capital improvements. Cost is not the only factor railroads consider. For example, there are a limited number of suppliers of rolling stock. As a result, cars and locomotives must be ordered well in advance. Additionally, there are environmental and quality of life factors that must be considered that often slow down the construction of additional infrastructure. Local residents may be opposed to additional traffic on a nearby rail line if it increases levels of noise and vibration, and environmental rules may prohibit construction in the most advantageous locations. In effect, rail carriers spend considerable time planning major improvements to the fixed physical plant. One response to the capacity crunch has been the use of public funds to finance capacity improvements through public‐private partnerships (PPPs). The principal goal of PPPs is to increase capacity in a particular corridor by adding infrastructure. By reducing a railroad company’s cost of capital, public sector financing effectively increases the likelihood of capital investments and capacity expansion. The Alameda Corridor in Los Angeles is a well‐known PPP that combined several rail lines into one, grade‐separated route. Other PPPs are being considered in Virginia and Chicago. Despite the popularity of PPPs, the trend has been hampered by the difficulty of achieving an equitable division of costs and benefits between the public and private sector. The lack of a standardized methodology and perhaps more significantly, the difficulty of putting a price on intangible benefits have been key barriers to pursuing PPPs.

#### Electrically powered trains inevitably fail

DuosTech 10

(DuosTech, 1/14/2010 "SOLVING THE ELECTRICAL RAIL SYSTEM INSPECTION PROBLEM" http://www.duostechnologies.com/DownloadCenter/WP-EletricalRail.pdf)

The Achilles heel of the electrically powered train is the point of current collection between the pantograph contact shoe and the contact wire. Through time and use, the carbon surface of the shoe pressed against and tracking along the power line inevitably wears and becomes thin, torn, chipped or broken, often with catastrophic results. Eventually, movement of the shoe over the wire becomes so snatchy and sporadic that rupture of the wire is the inevitable result. Contact wire breach can cause serious system outages when it occurs. The expense of retrieving the train and repairing the wire, while substantial, cannot be compared to the human cost in terms of track stall danger, down time and missed connections while repairs are made.

### Links to Politics: Unpopular with Congress/Voters

#### **Congressional and Public Opposition to New Rail Infrastructure Spending Very High—Empirical Evidence**

Orski ‘10

Ken Orski is editor and publisher of Innovation NewsBriefs, an influential and widely read transportation newsletter. Living in a State of Denial. http://transportation.nationaljournal.com/2010/10/talkin-about-a-railvolution.php , OCTOBER 15, 2010 Fawn Johnson has framed this week’s question correctly when she asked if the government can support the growth of new passenger rail systems "in a way that won’t bankrupt the federal treasury or leave states high and dry." Most of my colleagues seemed to avoid answering the question. They emphasized instead the undisputed virtues of rail transportation and its contribution to job creation, mobility, congestion reduction and energy independence, as if implying that these benefits are so compelling and the need for funding is so obvious as to require no answer. The reaction of various advocacy groups to President Obama’s recent call for a $50 billion stimulus spending plan for transportation infrastructure has been similar. The benefits of the investment, they were suggesting, are so undisputable and so overwhelming that they leave us no choice but to find the money. And where should the funds come from? "Stay tuned, we’ll let you know," was the answer of one top Administration official. But convincing the next Congress of the need to act, whether to fund an infrastructure "down payment" of $50 billion or to authorize a proposed $500 billion multi-year surface transportation program, will not be easy. Most of the congressional lawmakers do not perceive infrastructure as an urgent priority. They see no signs of a popular outcry about the stalled transportation reauthorization, nor do they perceive a groundswell of grassroots support for massive transportation investments. Indeed, what they see is just the opposite. They note New Jersey voters strongly approving Governor Chris Christie’s decision to cancel work on the long-planned rail tunnel under the Hudson River on the grounds that "the state simply doesn’t have the money" to pay for overruns in the potential $11-14 billion project. They also see Republican candidates for governor in California (Meg Whitman), Florida (Rick Scott), Ohio (John Kasich) and Wisconsin (Scott Walker) pledging to cancel high-speed rail projects in their states if elected — and running ahead of their Democratic opponents who unanimously support President Obama’s $8 billion high-speed rail initiative. They see a bold and visionary Amtrak proposal to link Boston and Washington with a dedicated high-speed rail line greeted in Congress with a yawn. And they read in a much noticed Sunday Times Magazine article "Education of a President," that the President himself thinks "there’s no such thing as ‘shovel-ready projects’ when it comes to public works." More evidence of public opposition to higher infrastructure spending comes from the findings of a new October 2010 survey by the Pew Center on the States and the Public Institute of California titled "Facing the Facts: Public Attitudes and Fiscal Realities in Five Stressed States." By a large margin, respondents in five states (California, Arizona, Florida, Illinois and New York) showed a strong unwillingness to support additional transportation funding and offered to put transportation on the chopping block when asked which of their state's biggest expenses they would least protect from budget cuts.

### Links to Politics: Unpopular with Congress

#### High Opposition to Rail Infrastructure Projects Because of Cost and Lack of Benefit to Constituents

Orski ‘10

Ken Orski is editor and publisher of Innovation NewsBriefs, an influential and widely read transportation newsletter. Living in a State of Denial. http://transportation.nationaljournal.com/2010/10/talkin-about-a-railvolution.php , OCTOBER 15, 2010

It may be impolitic to say it, but warnings about our infrastructure falling apart seem to come largely from organized interests — stakeholders and advocacy groups. That is not to say that America does not need better roads or transit systems. Bur rightly or wrongly, elected officials often discount cries about "crumbling infrastructure" as self-serving demands for more government money. Moreover, many lawmakers come from rural districts that experience little traffic congestion, whose roads are well maintained and which never hope to benefit from high-speed rail service. And, as Rep. John Mica (R-FL), ranking member of the House Transportation and Infrastructure Committee and the potential future T&I Committee chairman in the 112th Congress likes to point out, more than 60 percent of the stimulus infrastructure dollars still remain unspent. All this adds weight to the legislative inertia of tackling a major infrastructure spending bill any time soon

#### **Congress Hostile to Rail Spending**

Orski ‘10

Ken Orski is editor and publisher of Innovation NewsBriefs, an influential and widely read transportation newsletter. Living in a State of Denial. http://transportation.nationaljournal.com/2010/10/talkin-about-a-railvolution.php , OCTOBER 15, 2010

As one of my colleagues, a sincere and lifelong transportation advocate, put it, "the transportation community is mostly talking to itself and living in a state of denial about the changing political mood." That mood—in the nation at large as well as in the next Congress— is becoming increasingly conservative and concerned with mounting budget deficits and out-of-control spending. Congress will be questioning costly new federal initiatives no matter how well intentioned, several congressional aides told us. And who knows, the new mood may even infect the White House. As one senior White House adviser, quoted in the Sunday Times Magazine story put it, "there's going to be very little incentive for big things over the next two years unless there's some sort of crisis." And by this he did not mean an "infrastructure crisis."

### Politics Link Insulator

#### The Recent Transportation Bill Didn’t Suck Political Capital. Compromise Was Based on NOT Funding New Rail Projects—Plan is a Violation of that Agreement.

Los Angeles Times ‘12

Updated 11:01 p.m., Friday, June 29, 2012 Transportation bill OKd, student loan hike halted

Congress, in a rare display of bipartisanship, on Friday sent to President Obama a $105 billion transportation bill that lawmakers from both parties touted as perhaps the largest jobs measure of the year. The measure also would avert a doubling of interest rates for millions of college student loans that was threatened to hit Sunday. The first major transportation bill since 2005, the legislation would keep highway and transit spending at current levels through the end of fiscal year 2014. It includes an expansion of a federal loan program sought by a group of U.S. mayors to fast-track bus and rail projects in traffic-choked regions. The House approved the bill by a lopsided 373-52 vote, demonstrating the power of pothole politics. The Senate approved it 74-19. The bill would provide financial incentives to states that crack down on distracted driving, require ignition interlock devices for DUI offenders and establish graduated licensing programs that restrict teenagers' driving privileges. It also would impose new safety rules on interstate passenger buses in response to a number of high-profile tour bus crashes. "We have a bill that will boost this economy," said Sen. Barbara Boxer, D-Calif., a sponsor of the bill who said it would create or save 2.8 million jobs. The bill's passage came only after lawmakers once again faced deadlines - a shutdown of the highway program Saturday and a doubling of student interest loan rates Sunday. Lawmakers also did something unusual for this Congress: They compromised. Republicans, in the face of White House opposition, dropped an effort to use the bill to try to advance the controversial Keystone XL pipeline. Environmentalists said the bill would weaken environmental reviews in order to satisfy GOP calls for speedier project approvals. Separately, the House approved an amendment to an annual spending bill that would prevent federal transportation funds from being spent in the next fiscal year for California's controversial high-speed rail project. The amendment was sponsored by Rep. Jeff Denham, R-Turlock (Stanislaus County), who cited the project's ballooning costs. Three California Democrats - Jim Costa of Hanford (Kings County), Zoe Lofgren of San Jose an Laura Richardson of Long Beach - issued a statement calling the amendment an "example of how thoughtless partisanship would hurt all of California."

### Links to Spendings

#### Electrification is slower and more costly—more stops and substations

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

The third rail has to be interrupted at switches and level crossings, which leave a gap in the power supply and can lead to the stopping of the train, this is particularly a problem for locomotive hauled trains as pick up shoes cannot be distributed throughout the train (3). The low voltage in the third rail is necessary so that no short circuit is formed with the ground or the running rails; the higher current increases however the electrical losses and therefore more substations are needed (33). For some railways that can increase the initial cost of electrification and the operation costs significantly compared to overhead wires (when the installation cost of wires per km is lower than for third rail) (33).

#### Electrification is expensive—empirics

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

Electric traction requires additional infrastructure, namely the transmission system. Electrifying an existing railway will for that reason need monetary resources. The initial capital cost are high, a study in 1974 showed that 10% mainline electrification in the USA would be equal to nine times the income of the largest railways there at the time (24). In other words it is expensive. The CalTrain electrification costs USD 1,2 million per mile, that includes substations, the catenary alone costs USD 400,000 per mile, the overall cost to electrify the 50 miles is USD 58.6 million (33). In the UK the figure is: GBP 450,000 to electrify one single track route km (catenary only) (26) and GBP 600,000 per single track route km overall cost (51). For a 50 miles corridor that is GBP 30 million (approximately USD 45 million one pound = 1.5 dollars (54) ).

### Backstopping Solvency Take-Out

#### Oil Price Decline Crushes Rail Electrification

Longman ‘9

Phillip Longman is a senior fellow at the New America Foundation. Back on Tracks

A nineteenth-century technology could be the solution to our twenty-first-century problems. <http://www.washingtonmonthly.com/features/2009/0901.longman.html#Byline>, Jan/Feb

Much of the electrification could start almost immediately. In the 1970s, the National Academy of Science and many others concerned about that decade’s energy crisis did extensive work in mapping out the specific lines most suitable to electrification. In 1977, at one of the many technical conferences on the subject, Milton J. Shapp, then governor of Pennsylvania, spoke for many of the visionaries involved when he observed that "particularly in view of the energy crisis, it is essential to the well-being of our nation that our major railroads electrify." A temporary fall in oil prices and an abundance of short-term thinking killed almost every last project, but we still have the benefit of all the studies sitting on shelves.

#### Transition is Expensive—Low Prices Crush Rail Electrification

Boyd 09

(John D Boyd, Associate Editor on Railroads, Apr 13, 2009 "Challenges loom for electric ideas" The Journal of Commerce http://www.joc.com/rail-intermodal/challenges-loom-electric-ideas)

He said BNSF has not asked manufacturers to start preparing anything. “We have really just had conversations with the locomotive guys, and one of them more than the other.” BNSF says locomotive change, transmission line systems complicate electricity options The talks also look at engines already being developed that convert some of a diesel locomotive’s braking power into energy that can be stored in batteries for a periodic boost in hauling power. Some industry officials speculate those systems could be modified to use trackside electricity, while others dispute it. BNSF planners are also weighing what kind of transmission lines could work best. Unlike subway trains that use a high-voltage “third rail,” intercity freight lines are subject to trespass and could not risk having an exposed third rail. The former Milwaukee Road freight line used electricity in the Northern Plains until 1974 with overhead “cantenary” wiring carried by numerous poles. Transmission lines now use metal towers to hold AC power lines high enough so they would not arc down to the trains. DC lines don’t have the arcing and could be buried like cable, but tapping them for train power would mean building a series of above-ground relays or converter devices. Some specialists say the buried DC lines are not feasible for rail, but Rose said “we would not agree with that ... with a DC line we are not to that point yet where we are saying no. And we’ve looked at an AC line, and that has further complications of safety and exposure.” Rose said last year’s sharp spike in oil prices generated some of the rail industry’s interest in electric freight trains. “When it got to $150 (a barrel) there were a lot of people starting to talk about this, but I can assure you at $52 it makes no financial sense.”

### No Impact to Attack on Railroad

#### A major attack on the freight system wouldn't really matter

Capra 2006

(Gregory S. Capra serves as the Chief of the Program Management Office, Air Force Center for Environmental Excellence, Andrews AFB, Maryland. He earned a bachelor’s degree in Civil Engineering from the University of Colorado and a master’s degree in Strategic Studies from the Air War College at Maxwell AFB, Alabama. He is licensed as a Professional Engineer in the Commonwealth of Virginia. December 2006 "PROTECTING CRITICAL RAIL INFRASTRUCTURE" http://cpc.au.af.mil/PDF/monograph/criticalrailinfrastructure.pdf)

A major attack on the freight system would have local and regional impacts but would be unlikely to have a significant economic impact on a national level. The resiliency of the freight rail system was best shown after the 1993 Midwest flood and 2005 Hurricane Katrina. These catastrophic events covered several states but the railroads were able to reroute shipments through other nodes. According to the Association of American Railroads, “Katrina’s damage to rail infrastructure affected six of the seven major railroads and Amtrak. The railroads diverted freight to other routes, going through a number of other gateways, including Memphis, Nashville, Montgomery, St. Louis and Chicago.” 61 The worst damage was along the 100-mile line between Pascagoula, Mississippi, and New Orleans, Louisiana. 62 Michael Ward, chairman, president and chief executive officer of CSXT said, “The physical impact to our rail infrastructure, while significant, is confined to a relatively small segment of our 22,000 mile network.” 63 Another example is the Howard Street Tunnel derailment in the center of Baltimore. The derailment blocked CSX’s only direct route from Florida to New York. The company placed low priority shipments on hold and worked with Norfolk Southern to reroute time sensitive shipments through Harrisburg, Pennsylvania. However, this added up to an extra 36 hours per shipment.

### AT: Air Pollution

#### Air quality is improving in the status quo

Feulner 05, PhD, president of the Heritage foundation, “Back to Earth,” the Heritage foundation, http://www.heritage.org/Press/Commentary/ed042205b.cfm, accessed 6/28/09

Moreover, that increase occurred even as the planet’s population grew by hundreds of millions of people. As Lomborg notes, “this means that more than three-quarters of a billion more people got access to clean drinking water and sanitation” during those 30 years. Those people are also breathing more healthful air. “We often assume that air pollution is a modern phenomenon, and that is has got worse and worse in recent years,” Lomborg writes. In fact, though, “the air of the western world has not been as clean as it is now for a long time.” To prove that, Lomborg uses government statistics to calculate the cost of air pollution. After all, bad air is expensive -- it tends to make people sick, and it tends to shorten lives. Lomborg found that, since 1977, “average air pollution costs have dropped almost two-thirds, from $3,600 to $1,300” in 1999. That demonstrates that our air is getting better -- much better. And Lomborg notes this is happening even as the American economy more than doubled and as the number of car miles traveled has doubled over the last 30 years. “There is also good reason to believe that the developing world, following our pattern, in the long run likewise will bring down its air pollution.” In addition, our cleaner planet is producing enough to feed billions of people.

#### Status Quo Solves Air Pollution

Schwartz 02, Joel, former CA air quality official, “The Air Pollution Con Game,” The Cato institute, published9-18-02, https://www.cato.org/dailys/09-18-02.html, accessed 6/28/09

The United States has achieved large declines in air pollution during the last few decades, yet polls show most Americans think air pollution has been getting worse. A misleading new report by the Public Interest Research Group helps explain why. PIRG cooked the pollution books to mislead Americans into thinking air pollution is bad and getting worse, when just the opposite is the case. PIRG's "Danger in the Air" is the latest in a series of recent activist group reports intended to scare Americans into believing they're seriously harmed by current air pollution levels, and that they should support more draconian and expensive regulations. PIRG doesn't want Americans to know that progress on air pollution has been nothing short of spectacular. San Bernardino, California, the smoggiest area of the country, exceeded federal health standards for ozone smog on more than 130 days per year during the 1980s. Today, that number is down to around 15 to 30 times per year and dropping. That success was repeated across the nation. Of the more than 1,000 government ozone-monitoring sites, only 46 percent met federal health standards in the early 1980s. Today, 86 percent meet the standards. Those gains occurred at the same time that Americans increased their automobile use by 75 percent. PIRG didn't want to tell that story. So it artificially inflated pollution levels. For example, PIRG's report proclaims, "During the 2001 ozone season, the national health standard for ozone smog was exceeded on no fewer than 4,634 occasions." That's a shocking number. But it has nothing to do with anyone's pollution exposure. According to government data, areas that exceed the federal ozone health standard do so an average of about 3 days per year. Even in areas with the highest ozone, PIRG's claims are a gross exaggeration. For example, PIRG asserts California exceeded the federal ozone standard 241 times in 2001, in effect telling 34 million Californians that they're breathing dangerous air on two of every three days. Yet most areas of California had no more than a few ozone exceedances in 2001, and even Crestline, with the worst ozone in the state (and nation), had 27. Air pollution will only continue to improve. Cars and trucks account for the majority of ozone-forming pollution. But thanks to technological progress, newer vehicles start out cleaner and stay cleaner as they age compared to older models. On-road pollution measurements show that, as a result, average vehicle emissions are declining about 10 percent a year, ensuring continued clean-air progress.

### Air pollution turn

Air Pollution Solves Cancer, Doesn’t Cause Lung Diseases

Loris and Lieberman, 2008, Nicholas Loris, research assistant, and Ben Lieberman, Senior Policy Analyst specializing in energy and environment for the Heritage foundation, “The EPA Should Not Increase the Ozone Regulation Burden,” The heritage foundation, 2/26/08, http://www.heritage.org/Research/EnergyandEnvironment/wm1827.cfm, accessed 6/28/09

Lowering ground-level ozone standards is not entirely beneficial for quality of health. The EPA distinguishes between "good" ozone and "bad" ozone: It maintains that ground-level (or "tropospheric") ozone is a pollutant and a health risk, while stratospheric ozone protects the public and the environment by shielding Earth from the Sun. However, ground-level ozone also reduces exposure to ultraviolet rays. In fact, Randall Lutter and Christopher Wolz suggest in Environmental Science and Technology News that a decrease in tropospheric ozone of 10ppb would result in increases in cataracts and non-melanoma skin cancer.[7] Subsequently, tightening the ground-level ozone standard could actually have detrimental health effects. The EPA identifies a number of health risks associated with breathing ozone, most of which involve harmful respiratory effects. Still, the correlation and severity of these risks, especially for asthma, are unclear. From 1980 to 2005, when levels of ozone and other pollutants fell in the United States, the number of asthmatics increased by 75 percent. In fact, some of the lowest asthma rates in the world are found in highly polluted developing countries in the former Soviet Union, while countries in Western Europe have considerably higher asthma rates and relatively lower levels of air pollution.[8]

### Alt Causes to CO2

#### **Deforestation due to global demand for meat emits CO2 and methane**

Mishler 6/29

(Jennifer Mishler, She is a volunteer coordinator with The Girls Gone Green, a nonprofit organization advocating for animals rights, veganism, and environmentalism. She is also an Onshore Volunteer with the Sea Shepherd Conservation Society, 6/29/12, “Environmental Study: Eat Less Meat to Fight Deforestation”, http://www.ecorazzi.com/2012/06/29/environmental-study-eat-less-meat-to-fight-deforestation/)

A new study on the environmental impact of meat production has resulted in a call to reduce meat consumption in order to fight deforestation. According to the study from the Union of Concerned Scientists (UCS), Grade A Choice? Solutions for Deforestation-Free Meat, the increasing global demand for meat has led to more and more deforestation for grazing pastures as well as land to grow livestock feed like soybeans. Meat consumption has been steadily declining over the past few years here in the United States, but globally the demand has gone up. UCS reports, “Producing meat, especially beef, requires large amounts of land. Global meat consumption has increased in recent years—and much of the new land for meat production has come from clearing tropical forests. This trend is a leading driver of deforestation and a significant contributor to global warming emissions. Beef in particular requires vastly more land than meats like chicken and pork, which use much less land to produce the same amount of protein.” UCS adds that nearly 60% of the agricultural land around the world is used in the production of beef, which provides less than 2% of the world’s consumed calories. They also call beef production an “inefficient use of feed resources,” as it takes 10 kilograms of grain to produce 1 kilogram of beef. They also report, “Cows produce extensive amounts of methane during the digestive process, a potent heat-trapping gas that exits the cow from both ends and causes about 23 times as much global warming per molecule as carbon dioxide. Large amounts of manure are also a leading cause of water pollution.” The study recommends eating pork or chicken in place of beef, or buying beef from cows raised on already deforested land. However, the study also points out that all of the food raised for livestock – “grains such as corn, legumes such as soybeans, and forage crops such as alfalfa (cut and fed to livestock as hay)” – is food that is not going directly for human consumption. That food is instead going to overfeed livestock that is killed and will produce much less food for less people. A 2011 study from the Environmental Working Group found that lamb is the worst meat for the environment, resulting in even more CO2 emissions than beef production. It seems like just staying away from meat is the best way to go if you’re concerned with the environment.

### Can’t Solve Warming: Alt Causes

#### Alt causes to CO2- past emissions still haunting us today

Science Codex 7/3

(The Science Codex, 7/3/12, “Pre-industrial emissions still causing temperatures to rise”, http://www.sciencecodex.com/preindustrial\_emissions\_still\_causing\_temperatures\_to\_rise-94454)

A climate model accounting for the carbon dioxide (CO2) released into our atmosphere before the industrial revolution has been used to show the detrimental effect of carbon emissions on global temperature in the long-term. In a study published today, 3 July, in IOP Publishing's journal Environmental Research Letters, researchers from the Carnegie Institution for Science have shown that pre-industrial emissions from land use changes are responsible for about nine percent of the increase in today's global mean temperature since that era. "The relatively small amounts of carbon dioxide emitted many centuries ago continue to affect atmospheric carbon dioxide concentrations and our climate today, though only to a relatively small extent," said co-author of the study Julia Pongratz. "But looking into the past illustrates that the relatively large amount of carbon dioxide that we are emitting today will continue to have relatively large impacts on the atmosphere and climate for many centuries into the future." Having modelled pre-industrial emissions from around the world, the researchers calculated the effect on emissions of the five-fold population increase between 850 and 1850 AD. This pre-industrial millennium of population growth was dominated by South and East Asia: China and India alone account for half of the population growth which led to the world's first living billion by 1850. The researchers' model suggests that between 20 and 40 per cent of China and India's entire history of CO2 emissions comprises pre-industrial emissions related to this population growth and demonstrates that these emissions are still having a detrimental effect on our climate today.

#### There are many alternative causes to US emissions- mainly electricity generation

US Energy Information Administration 6/26

(US Energy Information Administration, 6/26/12. “What are Greenhouse Gas Emissions? How Much Does the US Emit”, http://cleantechnica.com/2012/06/26/what-are-greenhouse-gas-emissions-how-much-does-us-emit)

Greenhouse gases trap heat from the sun and warm the planet’s surface. Of U.S. greenhouse gas emissions, the majority are related to energy consumption, and most of those are carbon dioxide. From 1990 to 2011, energy-related carbon dioxide emissions in the United States increased by about 0.4% per year. The United States produced about 18% of the world’s total energy-related carbon dioxide in 2010 — the last year for which comparable data are available. Petroleum is the fossil fuel that accounts for the most carbon dioxide emissions. Electricity generation and transportation are the biggest sources of energy-related greenhouse gases. The electric power industry currently emits the most energy-related greenhouse gas. Because greenhouse gases trap radiation (heat) from the sun and warm the planet’s surface, a certain amount of these gases is beneficial (see “Did You Know?”). But as concentrations of these gases increase due to human activity, more warming occurs than would happen naturally. According to the U.S. Environmental Protection Agency, about 6.8 billion metric tons carbon dioxide equivalent (CO2e) of greenhouse gases were emitted by the United States in 2010 (the last year the full inventory is available).1 Other countries with significant emissions include China, the countries of Europe, Russia, and Japan. What Specific Kinds of Greenhouse Gases Does the United States Emit? The major greenhouse gases the United States emits as a result of human activity and that are included in U.S. and international emissions estimates are: Carbon dioxide (CO2) Methane (CH4) Nitrous oxide (N2O) High-GWP gases, which are: Hydrofluorocarbons (HFCs) Perfluorocarbons (PFCs) Sulfur hexafluoride (SF6) There are other greenhouse gases that are not counted in U.S. or international greenhouse gas inventories: Water vapor is the most abundant greenhouse gas, but most scientists believe that water vapor produced directly by human activity contributes very little to the amount of water vapor in the atmosphere, and therefore EIA does not estimate emissions of water vapor. Research by NASA suggests a stronger impact from the indirect human effects on water vapor concentrations. Ozone is technically a greenhouse gas because it has an effect on global temperature. However, at higher elevations in the atmosphere (stratosphere), where it occurs naturally, it is needed to block harmful UV light. At lower elevations of the atmosphere (troposphere) it is harmful to human health and is a pollutant regulated independently of its warming effects. How Much of Total U.S. Greenhouse Gas Emissions Are Energy Related? Of the total amount of U.S. greenhouse gases emitted in 2010, about 87% were energy-related and 91% of those energy-related gases were carbon dioxide from the combustion of fossil fuels. Which Fuel Accounts for the Largest Share of Energy-Related Carbon Dioxide Emissions? Petroleum is the largest fuel source of carbon dioxide emissions from energy consumption in the United States. Other important fossil fuel sources of carbon dioxide emissions include: Petroleum — accounting for 2.3 billion metric tons (42%) in 2011 Coal — accounting for 1.9 billion metric tons (34%) in 2011 Natural gas — accounting for 1.3 billion metric tons (24%) in 2011 What Are the Important Non-Carbon Dioxide (Non-CO2) Greenhouse Gases Related to the Production and Consumption of Energy? Of the non-CO2 gases that contribute to energy-related greenhouse gas emissions, methane contributes the most (6%) — mainly from emissions that leak out of natural gas systems, coal mines, and petroleum exploration and production facilities. Nitrous oxide contributes another 1% — from mobile and stationary combustion of fuels and waste. How Are Energy-Related Carbon Dioxide Emissions Distributed Throughout Our Economy and What Sector of Our Economy Is Responsible for the Most Emissions? Electric power generation and transportation are the biggest sources of energy-related CO2 emissions in our nation, with respective shares of 40% and 34% of our total energy-related CO2 emissions in 2011. Taken together, emissions in power generation and transportation increased at an average annual rate of 0.8% between 1990 and 2011. The rest of our CO2 emissions result from direct use of fossil fuels in homes, commercial buildings, and industry. These emissions declined on average by 0.4% per year since 1990. Since electric power is ultimately used in homes, commercial buildings, and industry, emissions associated with power generation can be allocated to each end-use sector based on their electricity consumption to obtain another perspective. Using this approach, the transportation sector is currently the largest emitter. Our cars, trucks, planes, trains, ships, and barges produced 1.8 billion metric tons CO2 in 2011. Emissions of CO2 from this sector have grown at an average rate of 0.7% since 1990. The industrial sector — which consists of activities such as manufacturing, construction, mining, and agriculture, is the next biggest source of energy-related CO2 to the transportation sector — a total of 1.5 billion metric tons in 2011. Its emissions have been declining since 1990 due primarily to the loss of energy-intensive industries such as steel. The commercial sector — which includes such sources as schools, office buildings, and shopping malls — accounts for a total of 1.0 billion metric tons of energy-related CO2 emissions, with about 77% of it coming from the power plants providing the electricity used in the buildings. Its CO2 emissions have grown the fastest since 1990, at an average annual rate of 1.1%. The residential sector — the homes we live in — accounts for 1.2 billion metric tons of energy-related CO2, 71% of which is produced at power plants providing homes electricity. Residential sector emissions have grown at an average annual rate of about 1.0% since 1990.

### Can’t Solve Warming: Other Countries

#### The US isn’t the biggest emitter of CO2 and US emissions are on the decline- Asia Pacific emits more and is on the increase

Consumer Energy Report 7/2

(Robert Rapier, Chief Technology Officer for Merica International- a renewable energy company, 7/2/12, “Global Carbon Dioxide Emissions — Facts and Figures”, http://www.consumerenergyreport.com/2012/07/02/global-carbon-dioxide-emissions-facts-and-figures/)

In the U.S., the public is bombarded with messages about climate change. One may get the impression that if we only stop the next pipeline and slow down the growth of Canada’s oil sands, we are one step closer to victory. But this is really akin to fighting a small local skirmish while a war rages on the other side of the globe. But the skirmish does not change the outcome of the war. I am going to take up this theme in a follow-up column, but for now let’s examine what’s going on in the world. First, here is the global carbon dioxide emissions picture: The graph shows that the growth rate in emissions over the past decade is faster than that of previous decades — indicating carbon dioxide emissions have accelerated in recent years. Prior to 2002, the incremental annual increase had never reached 1 billion new metric tons of carbon dioxide. Since 2002, 1 billion incremental tons have been added three times: In 2003, 2004, and 2010. In fact, 2010′s addition of 1.58 billion new tons globally is the largest annual increase on record. The incremental increase over the past decade was at least 0.87 billion new tons on 4 other occasions. Only once during the decade — in 2009 in response to recession — was there a measured year-to-year decrease. One reason I think climate change advocacy has been so ineffective is that most advocates are misinformed about the present mixture of global carbon emissions. The next figure tells the tale: This figure closely resembles the coal graph from World Energy Consumption Facts, Figures, and Shockers because in fact global coal consumption is the largest contributor to rising carbon dioxide emissions. Asia Pacific is the source of 45% of global carbon dioxide emissions, and is on a growth trajectory to reach 50% by the end of the decade. In the U.S., coal consumption is on the decline because new supplies of natural gas are displacing coal in power plants. The change has been so dramatic that since 2006, the U.S. is the world leader in reducing carbon dioxide emissions : US emissions have now fallen by 430 Mt (7.7%) since 2006, the largest reduction of all countries or regions. This development has arisen from lower oil use in the transport sector … and a substantial shift from coal to gas in the power sector. One bit of irony here is that some environmental groups are seeking to stop fracking altogether, or have otherwise fought against the expansion of natural gas. However, if they were successful this would in the short-term absolutely mean a return to coal and an increase in carbon dioxide emissions. (Wind and solar will make large contributions long-term, but in the short term can’t displace idled coal plants). So emissions in the U.S. have declined despite misguided environmental obstructionism. The next graphic shows the picture in the rest of the world: While each region’s total is far less than Asia Pacific’s 15 billion tons of emissions in 2011, the trends are the same. Developing countries are increasing their emissions as they increase standards of living. One question that often comes up concerns the historical U.S. contribution to the atmospheric carbon dioxide inventory. Developing countries will point to historical U.S. emissions and argue that these emissions enabled U.S. development. They don’t believe it is in any way fair to restrict their development since developed countries have already emitted huge quantities of carbon dioxide. There is truth to this argument. From 1965 through 2011, U.S. cumulative emissions of carbon dioxide were 255 billion metric tons. That is enough carbon dioxide to raise the atmospheric carbon dioxide concentration over the past 46 years by 18 parts per million (PPM) from just the U.S. contribution. (See Footnote for calculation). As a region, Asia Pacific has added even more cumulative carbon dioxide than that since 1965 at 287 billion metric tons. EU countries added another 203 billion tons. But as far as countries go, the U.S. has by far the highest cumulative emissions since 1965. China is in 2nd place at 133 billion tons, but no other country even breaks the 100 billion ton barrier. Globally, cumulative emissions since 1965 are 1.0 trillion tons, which should have increased (according to the calculation in the footnote) atmospheric carbon dioxide by 73 ppm. And if we cross-check the data from the Mauna Loa Observatory , we see that atmospheric carbon dioxide was about 320 ppm in 1965 and is just above 390 ppm in 2012. Per Capita Emissions The U.S. also has much higher per capita emissions than developing countries and EU countries. In 2008, the U.S. had the 12th highest per capita carbon dioxide emissions, but due to decreases in recent years are probably further down the list of countries now.

#### India and China will account for half of transportation-related emissions world-wide

ZeeNews 6/9

(Zeenews, Indian news agency, 6/9/12, “Emissions set to raise in India and China: UNEP”, http://zeenews.india.com/news/world-environment-day-2012/emissions-set-to-raise-in-india-and-china-unep\_780761.html)

Beijing: Emissions in India and China set to rise as Asia-Pacific region faces mounting challenges in tackling climate change, water scarcity, species extinction and hazardous waste as its economy forges ahead, a UN report has warned. The region needs to improve governance structures and accountability and scale up successful policy initiatives to achieve sustainable development, the UN Environment Programme (UNEP) said in a report. By 2030, China and India would account for more than half of transport-related emissions worldwide, which was projected to increase by 57 percent from the 2005 level, it said. More than 450 million people in the Asia-Pacific still had no access to clean drinking water in 2008, accounting for over 40 per cent of the world total, and only a handful of the region's countries have established the necessary legal and institutional capacities for integrated water resources management. The Asia-Pacific region was also under growing pressure on bio-diversity, as government efforts lag behind the extent of habitat loss and degradation, over exploitation, alien species invasion, climate change and pollution, it added. Unsustainable growth, population growth, rapid urbanisation and consumption increase impact on the region's environment, according to the fifth edition of the Global Environment Outlook report released by the UNEP in Beijing. Under a business as usual scenario, the Asia-Pacific was expected to contribute approximately 45 per cent of global energy-related carbon dioxide (CO2) emissions by 2030 and an estimated 60 per cent by 2100, the report said. In addition, the UNEP urged Asia-Pacific nations to foster changes of consumption patterns to reduce waste, step up controls on chemicals production and use and improve management of contaminants.

#### **Developed countries only clean up the emittants as they need to update while developing countries’ energy systems grow dirtier and larger**

Reuters 6/14

(Gerard Wynn, market analyst for Reuters, 6/14/12, “World energy gets dirtier: Gerard Wynn”, http://www.reuters.com/article/2012/06/14/us-energy-carbon-idUSBRE85D13S20120614)

Energy consumption among rich and developing countries got cleaner and dirtier respectively last year, in a starker than ever trend which reinforces how global climate action is now in the hands of emerging economies. Carbon intensity of energy measures the CO2 emissions per unit of consumption, in other words how polluting energy is in carbon terms. Data published by the energy company BP on Wednesday showed that such carbon intensity in OECD countries reached a record low last year, in data going back to 1965. That reflected a vigorous trend towards deployment of renewable energy and gas, both less carbon-emitting than coal, against the backdrop of falling energy demand. By contrast, in non-OECD countries, carbon intensity reached a 28-year high, following a leap in coal consumption, continuing an upward trend which started in 2000. You now have to go back to 1984 for a time when non-OECD countries had a dirtier energy mix. That matters because it is also these countries which are growing their energy consumption. It is their energy policy, therefore, that will over-whelmingly decide the temperature of the planet at the end of the century and beyond: the signs are not promising. The present transition away from coal to shale gas in the United States and to renewable energy in the European Union is less important. Calculating what happens next in global CO2 emissions requires an unpicking of trends in growth in GDP and energy consumption, and the available data suggest that there is no prospect for global CO2 emissions to stop rising. RISING CO2 In 2011, demand for energy grew fastest in absolute (not percentage) terms, in China, followed by India, Russia, Saudi Arabia, Canada, Turkey and Brazil, the BP data show. In all these countries carbon intensity also rose. Energy demand fell fastest in Japan, followed by Germany, Britain, France, the United States, the Netherlands and Italy. These countries all saw their carbon intensity of energy fall, with the exception of Italy and the Netherlands which saw small rises. The message? Developed countries are cleaning up their energy system, but only at the margins as they replace ageing stock, in an effect more than offset by emerging economies which are both growing and becoming dirtier at the same time. The result is surging CO2 emissions, both in non-OECD countries (up 6 percent in 2011) and globally (up 3 percent).

#### China may be emitting more than we originally thought- new data shows discrepancies

Reuters 6/10

(Reuters, 6/10/12, “China emissions study suggests climate change could be faster than thought”, http://www.eco-business.com/news/china-emissions-study-suggests-climate-change-could-be-faster-than-thought)

China’s carbon emissions could be nearly 20 percent higher than previously thought, a new analysis of official Chinese data showed on Sunday, suggesting the pace of global climate change could be even faster than currently predicted. China has already overtaken the United States as the world’s top greenhouse gas polluter, producing about a quarter of mankind’s carbon pollution that scientists say is heating up the planet and triggering more extreme weather. But pinning down an accurate total for China’s carbon emissions has long been a challenge because of doubts about the quality of its official energy use data. It is that data which is used to compute how the planet’s climate will change, helping plan for more extremes of drought, flood and the impact on crops. “The sad fact is that Chinese energy and emission data as primary input to the models will add extra uncertainty in modelling simulations of predicting future climatic change,” say the authors of a study in the journal Nature Climate Change. The team of scientists from China, Britain and the United States, led by Dabo Guan of the University of Leeds, studied two sets of energy data from China’s National Bureau of Statistics. One set presented energy use for the nation, the other for its provinces. They compiled the carbon dioxide (CO2) emission inventories for China and its 30 provinces for the period 1997-2010 and found a big difference between the two datasets. “More uncertain than ever” “The paper identifies a 1.4-billion tonne emission gap (in 2010) between the two datasets. This implies greater uncertainties than ever in Chinese energy statistics,” Guan, a senior lecturer at the School of Earth and Environment at Leeds University, told Reuters in an emailed response to questions. That is slightly more than the annual emissions of Japan, one of the world’s top-five greenhouse gas polluters. Guan added the China is not the only country with inconsistent energy data. Scientists say the world is already racing towards a warming of 2 degrees Celsius or more in coming decades because of the rapid growth in emissions from burning fossil fuels and deforestation. Adding another billion tonnes into computer models would accelerate the pace of expected warming. According to Chinese national statistics, on average, CO2 emissions have been growing 7.5 percent annually from 1997 to 7.69 billion tonnes in 2010, the authors say in the study. In contrast, aggregated emissions of all Chinese provinces have increased 8.5 percent on average to 9.08 billion tonnes in 2010. By comparison, US emissions were 6.87 billion tonnes in 2010, the Environmental Protection Agency says. The scientists said differences in reported coal consumption and processing at the provincial level were the main contributors to the discrepancy in energy statistics. The findings also expose the challenges China faces in introduce emissions trading schemes, which need accurate measurement, reporting and verification of energy use and carbon pollution at the local and national level. Yang Fuqiang, a former Chinese energy official and senior adviser for the Natural Resources Defense Council in Beijing, said provinces routinely underestimate both their carbon emissions and their energy utilisation rates. “I would say the biggest concern about the accuracy and reliability of (China’s emissions) data is coal – and that comes from too many small coal mines supplying small enterprises and industrial plants. They have no monitoring systems and generally speaking, they are also avoiding tax,” he said. With provinces now under pressure to meet targets, they are now likely to underestimate emissions, he added. China is committed to reducing energy intensity – the amount produced per unit of GDP – by 16 percent over the 2011-2015 period, and carbon intensity by 17 percent. It also plans to cap total energy use at 4.1 billion tonnes of standard coal by 2015.

#### Alt causes—China, India emissions mean plan can’t solve

USA Today 11 (5/17, “Latest climate change report puts deniers on the hot seat”, accessed 6/27/11, LN)

Even so, as the report says, "uncertainly is not a reason for inaction," and the most effective national response to climate change would be to "substantially reduce greenhouse gas emissions." If the deniers want a more legitimate basis for resistance, it is this: Even bold and costly national U.S. actions to limit greenhouse gases will be ineffective unless developing nations also curb their emissions. It's hard to imagine China and India acting, however, if the U.S. doesn't lead. The Climate Choices report, requested by Congress, suggests investing in clean-energy technology, looking for ways to mitigate and adapt to climate change, and most important putting a price on carbon dioxide emissions. "Cap-and-trade," a complex but proven way to use market forces to reduce pollution, passed the House in 2009. Like health care reform, though, it has become so unpopular in GOP circles that at the first Republican presidential debate this month, former Minnesota governor Tim Pawlenty abjectly apologized for once supporting the idea. "I've said I was wrong," Pawlenty groveled. "It was a mistake, and I'm sorry."

#### China and India are key to solve Global Warming, without them all efforts will fail

New York Times 09, (New York Times 11-17-2009, “On Climate Change Efforts, China Is Key” http://economix.blogs.nytimes.com/2009/11/17/on-climate-change-efforts-china-is-key/)

It is time to accept that the choices of China and India, not the United States, will determine the world’s future carbon emissions. America’s environmental actions will achieve their biggest returns if they influence the future carbon emissions of the billion-plus-person polities of Asia. During my children’s lifetimes, if not my own, China, and probably India, will surpass the United States in economic importance. Even if education and political institutions remain stronger in the United States and give the average American of the next generation 50 percent more income than the average Chinese, America’s gross domestic product will still only be a third of the G.D.P. of China, assuming population levels stay even. While many will feel an understandable twinge of anxiety when China’s national product surpasses our own, President Obama is fundamentally correct that “one country’s success need not come at the expense of another” and that the United States should “welcome China as a strong and prosperous and successful member of the community of nations.” Just as the world’s economy has long benefited from American prosperity and productivity, China’s rise provides Americans with benefits like inexpensive, high-quality products and a vast market for exports. Everyone should rejoice when a billion more humans live with material comfort rather than hunger and hardship. But the world must hope that the Chinese will develop in ways that use less energy, and must encourage them to live in tall urban towers rather in the sprawling car-intensive suburbs. American emissions would fall if we built at higher densities in areas with more naturally benign climates, like coastal California. But while reducing our pro-sprawl policies like extensive highway construction and the home mortgage interest deduction would cut emissions, America’s ability to have a direct impact on global carbon emissions through better urban policies is modest. About 20 percent of America’s carbon emissions come from powering our homes. Another fifth comes from our cars. About one-half of America’s housing stock has been built since the mid-1970s. Let’s assume that one-half of America’s housing stock in 2040 will also be built over the next 30 years, and that these homes will be a lot greener. If the United States undertakes Herculean efforts to build denser, less energy-intensive buildings, the average new home might use one-half the household and transportation energy of our current homes. This change will lead to a 25 percent reduction in our total household and transportation emissions, a 10 percent reduction in total United States carbon emissions and a 2 percent reduction in global emissions. A recent National Research Council report on compact construction, under the committee leadership of my colleague Tony Gomez-Ibanez, similarly concluded that denser development can significantly reduce vehicle emissions, but that the overall impact on global emissions will be modest. However, if China’s per capita carbon-dioxide emissions increase by 14.4 tons and reach United States levels, then world carbon-dioxide emissions will increase by about 19 billion tons, or 67 percent. If per capita carbon emissions in both China and India rise to United States per capita levels, then global carbon emissions will rise 138 percent. If the emissions of these rising superpowers stop at French, rather than American, levels, global emissions will only increase by about 28 percent. This suggests the biggest contribution that the United States can make to reducing world carbon emissions is to persuade the Indians and Chinese to use energy like Frenchmen rather than Americans

### AT: Modelling Solves Climate

#### Russia and China Already Have Electric Railroad, Plan Doesn’t Solve Two of Three Largest Emitters

Peoples’ Daily ‘6

China has world's second largest electric railway network, UPDATED: 09:31, September 29, 2006, <http://english.peopledaily.com.cn/200609/29/eng20060929_307504.html>

The extension of the electric railway between Hangzhou, the capital of Zhejiang province in China's east, and Zhuzhou city in Hunan province in central China, was recently completed. This now means that the total amount of electric railway line in China exceeds 24,000 kilometers, the second-largest network in the world behind Russia. Electric trains have a high transport capacity, low operation costs and energy consumption, and are environmentally friendly. The first electric railway was built between Baoji and Fengzhou, both located in Shannxi province in the northwest of China, in 1958. By the end of the 10th Five-Year Plan, the length of the line had exceeded 20,000 kilometers. There are currently 49 electric railway lines in use, which carry 43 percent of goods transported by rail, and accounting for 27 percent of the combined length of China's railways A well arranged and standard electric railway operation network was established at the very beginning.

### AT: Efficiency Solves

#### Electric isn’t efficient—weather, empirics, power station emissions

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

The case above illustrates the problem with electric traction being depended on the infrastructure, the weather can affect the power transmission as well, often in the UK strong winds affect the catenary (59) and hence the train operation, further ice can stop the trains moving, that happened for example in Germany at Christmas 2002 when people had to celebrate in trains as they had to wait up to eight hours until rescued (60). Electric locomotives might be more reliable than diesel ones, but that does not mean that the overall electric system is more reliable as the examples above illustrate. The most reliable railway company in the UK is Chiltren with a moving annual average of 95.3% (61) the company uses only diesel trains (62). The fuel mix is very important to determine the emissions, in case the railway is mainly powered through coal fired power stations it can be less environmentally friendly than diesel operation (63).

#### Not efficient—wasteful during off-peak times

Hoffrichter, 9

(Andreas Hoffrichter, Ph.D. candidate at the University of Birmingham Centre for Railway Research and Education, May 8, 2009, Aston University School of Engineering and Applied Science, “Final Year Project: Aspects of Railway Electrification in Britain”, http://postgrad.eee.bham.ac.uk/hoffrichtera/website/Final%20Year%20Project.pdf)

Electricity is difficult to store in large quantities (57) and some power stations e.g. coal and nuclear cannot react to quick changes in demand (it takes days) (58). If they are the main source of electricity the energy might be wasted as the input of energy into the transmission system has to cater for peak hour demand (3). The potential waste of electricity at off-peak times may reduce the energy efficiency of the electric system.

### AT: Oil Shocks

#### Oil policy ensures regional actors protect the Gulf

Jones, 11
(Prof-History-Rutgers, 6/10, [http://www.theatlantic.com/international/archive/2011/06/time-to-disband-the-bahrain-based-us-fifth-fleet/240243/1/)](http://www.theatlantic.com/international/archive/2011/06/time-to-disband-the-bahrain-based-us-fifth-fleet/240243/1/%29)

Aside from enabling brutal behavior, the logic behind our heavy military presence in the Gulf may be outdated. Ever since President Jimmy Carter outlined a strategic doctrine that stated the U.S. would "use any means necessary, including military force" to protect its "vital interests" in the Persian Gulf, the United States has seen its military commitments to the region intensify. Since the mid-1980s, the U.S. has in a sense been engaged in one long war in the Gulf. It helped intensify the Iran-Iraq war of the 1980s, led Desert Storm in 1990 and 1991, imposed no-fly zones over Iraq in the 1990s, and invaded Iraq in 2003, all to some extent on the basis of the Carter Doctrine. If security and stability are measured by the absence of conflict, the American military approach to the Gulf has not been much of a success. But the Gulf, after all, is a tough neighborhood, and the U.S. has maintained the oil access it's sought. Had the world not intervened in 1990, Saddam Hussein could well have used his captured of Kuwaiti oil fields for political leverage against his many enemies. Iran could try the same using its own vast energy resources. But these anxieties are based on a fundamental miscalculation -- that oil is in tight supply and that its distribution or flow must be protected. These fears are rooted in the oil crises of the 1970s, when Arab oil embargoes and the Iranian revolution shook the world economy and helped tip the U.S. into recession. The reality is that, today, there is not too little oil. There is too much oil. There has been ever since the 1970s crises led oil producers to develop new energy resources in deep-water wells, oil sands, shale, and heavy crude, all of which have drastically expanded the global energy supply. But oil producers, following the example of oil companies in the 20th century, have been committed, especially recently, to manufacturing scarcity. They do so in order to drive up prices and revenues, a significant share of which they redistribute at home in an effort to buy the favor and the quiescence of their subjects. This is especially true in Saudi Arabia and Bahrain. Since the late 1960s, oil states have viewed the provision of cradle-to-grave social services as a basic part of their ruling contract. But as they've expanded services and wealth, they have eliminated opportunities for political participation. It is an expensive arrangement, one that depends on sufficient revenues. As a result, the regimes are dependent on their prize for survival. For all the geostrategic considerations that surround protecting oil, the bottom line is that energy producers have to sell their product. They cannot drink it. Given this, and given that fears of instability drive prices up even further, it is not necessary for outside powers like the U.S. to protect them. In the long run, protecting the oil producers has only entrenched a system in which "friendly" oil powers limit production and, rather than serve global markets, work against them. It is unfavorable but predictable, an arrangement that Washington has accepted for decades. Although successive presidents have come under pressure to end American dependency on Middle Eastern oil, since the early 1970s, billions of petrodollars have recycled through the U.S. economy.

#### Structural checks to shocks

Whitehouse '10

Mark, WSJ, "Oil Prices Seen as a Threat Again," 12/19/10 online.wsj.com/article/SB10001424052748703395904576025762319723364.html AD 5/23/12

In the physical market, oil producers have ample capacity to keep prices in check. The International Energy Agency estimates spare capacity among Organization of Petroleum Exporting Countries at 6.4% of global demand, nearly double the level of late 2007. As of the end of November, the world had enough oil in its inventories to cover demand for 20 days without drying out pipelines and refineries, according to data provider Oil Market Intelligence. That's up from 14 days in November 2007. Thanks to the added inventories, "the broader economy is now more insulated from oil shocks" than it was back in 2008, says Philip Verleger, an energy economist at the University of Calgary's Haskayne School of Business. While many see speculative investment as a source of volatility, it might actually help prevent a spike, says Mr. Verleger. By pushing up the price of oil to be delivered in future months, investors have made it more attractive for traders to buy oil now and hold it for future sale. That, in turn, keeps inventories higher, providing a cushion that can limit price swings in the event of sudden changes in supply and demand. If the price of oil does rise further, it won't necessarily do economic damage. For one, the price spike of 2008 led many people and companies to cut back on energy consumption, a shift that could make them more resilient to price increases this time around. Beyond that, oil-price increases can have little to no impact if they correspond to a decrease in the value of the dollar against other currencies. Because oil is bought and sold in dollars, it doesn't become more expensive for most of the world's buyers unless the price increase exceeds the drop in the dollar. And in the U.S., the export boost from a cheaper dollar can create more jobs, offsetting the pain of higher prices at the gas pump.

#### **Global spare capacity is huge – zero risk of serious shortages**

Gholz and Press 8

(Eugene, Professor of Public Affairs – University of Texas at Austin, and Daryl G., Professor of Government – Dartmouth College, “All the Oil We Need”, The New York Times, 8-21, Lexis)

WHILE oil prices have declined somewhat of late, the volatility of the market and the political and religious unrest in major oil-producing countries has Americans worrying more than ever about energy security. But they have little to fear -- contrary to common understanding, there are robust stockpiles of oil around the globe that could see us through any foreseeable calamities on the world market. True, trouble for the world's energy supplies could come from many directions. Hurricanes and other natural disasters could suddenly disrupt oil production or transportation. Iran loudly and regularly proclaims that it can block oil exports from the Persian Gulf. The anti-American rhetoric of President Hugo Chavez of Venezuela raises fears of an export cutoff there. And ongoing civil unrest wreaks havoc with Nigeria's output. Even worse, this uncertainty comes in the context of worrisome reports that oil producers have little spare capacity, meaning that they could not quickly ramp up production to compensate for a disruption. But such fears rest on a misunderstanding. The world actually has enormous spare oil capacity. It has simply moved. In the past, major oil producers like Saudi Arabia controlled it. But for years the world's major consumers have bought extra oil to fill their emergency petroleum reserves. Moreover, whereas the world's reserve supply once sat in relatively inaccessible pools, much of it now sits in easily accessible salt caverns and storage tanks. And consumers control the spigots. During a supply disruption, Americans would no longer have to rely on the good will of foreign governments. The United States alone has just more than 700 million barrels of crude oil in its Strategic Petroleum Reserve. Government stockpiles in Europe add nearly another 200 million barrels of crude and more than 200 million barrels of refined products. In Asia, American allies hold another 400 million barrels. And China is creating a reserve that should reach more than 100 million barrels by 2010. Those figures only count the government-controlled stocks. Private inventories fluctuate with market conditions, but American commercial inventories alone include well over a billion barrels. Adding up commercial and government stockpiles, the major consuming countries around the world control more than four billion barrels. Some policy makers and analysts worry that these emergency stocks are too small. For example, they sometimes compare the American strategic reserve to total American consumption, so the reserves appear dangerously inadequate. The United States consumes about 20 million barrels of oil every day, so the Strategic Petroleum Reserve could only supply the country for 35 days. (Furthermore, the United States could not draw oil out of the reserve at anything approaching a rate of 20 million barrels per day.) This is why President Bush in his 2007 State of the Union address called for doubling the strategic reserve. But this vulnerability is a mirage. The size of plausible disruptions, not total consumption, determines the adequacy of global reserves. The worst oil disruptions in history deprived global markets of five million to six million barrels per day. Specifically, the collapse of the Iranian oil industry during the revolution in 1978 cut production by nearly five million barrels a day, and the sanctions on Iraq after its conquest of Kuwait in 1990 eliminated 5.3 million barrels of supply. If a future disruption were as bad as history's worst, American and allied governments' crude oil stocks alone could replace every lost barrel for eight months.

### AT: Oil Shocks 🡪 Resource Wars

#### Great powers won’t go to war over oil

-Fighting is expensive, producer/consumer interests align, war declining

Fettweis ‘09

Christopher, Professor of Political Science @ Tulane "Ch 5 No Blood for Oil: Why Resource Wars Are Obsolete," p. 66-75 in "Energy Security Challenges for the 21st Century: A Reference Handbook," Edited by Gal Luft, executive director of the Institute for the Analysis of Global Security and Anne Korin, co-director of the Institute for the Analysis of Global Security, 2009.

At some point in the 21st century, the world will begin to run low on oil. Demand around the world is skyrocketing for the nonrenewable resource, far outpacing the growth of supply, and all projections suggest the pace will continue. While oil will not likely ever run out in the literal sense, geologists warn that in the not-so-distant future oil may well be a relatively scarce commodity Per capita energy use may hold steady or even decline across much of the industrialized world, but projected growth in population will more than compensate. In the U.S. Energy Information Agency mid-range projection, even with higher prices world oil use will grow from 86 mbd in 2007 to 103 mbd in 2015 and 119 mbd by 2025.’° Such growth would obviously require a major increase in the current production capacity of the industry. Few think that supply is likely to be able to keep pace. War need not result from such shortages, however. There are at Least three good reasons to believe that war to control the territory that contains fossil fuels will continue to be a very rare phenomenon as the new century unfolds: First, fighting to control oil is likely to be a self-defeating proposition. It will always be cheaper to buy oil than to seize it. Second, the interests of consumers and producers do not conflict—all parties involved in oil production have serious interests in stability, without which no one can benefit. Finally, and perhaps counter-intuitively, all kinds of warfare are becoming more and more rare. The 21st century is likely to be a great deal more stable than the 20th century and oil politics should prove to be no exception.

#### Oil wars won’t happen—unfeasible and empirically denied

Fettweis ‘09

Christopher, Professor of Political Science @ Tulane "Ch 5 No Blood for Oil: Why Resource Wars Are Obsolete," p. 66-75 in "Energy Security Challenges for the 21st Century: A Reference Handbook," Edited by Gal Luft, executive director of the Institute for the Analysis of Global Security and Anne Korin, co-director of the Institute for the Analysis of Global Security, 2009.

Fortunately, there is good reason to believe that resource wars will not be any more common in the coming century than they were in the last. There has never actually been a war over fossil fuels—the closest call was in 1973, when the Arab members of OPEC stopped selling oil to the United States and the Netherlands. Washington drew up plans to break the embargo by force and seize Arab oil. Secretary of State Henry Kissinger told Business Week that it was “one thing” to use oil as a weapon in the case of dispute over price, but it was quite “another where there is some actual strangulation of the industrialized world.”2 U.S. Secretary of Defense James Schlesinger apparently wrote to his British counterpart that the United States would not tolerate threats from “under-developed, under populated” countries and that it was “no longer obvious” that the United States could not use force to resolve the stand-off.3 That is as dangerous as the situation was to get, however. Despite the contingency planning, using force never appears to have been a serious option to resolve the crisis. Kissinger repeatedly stated afterward that he determined military solutions to be “totally inappropriate” to the problem: the prospect of using military force to end the oil embargo died without serious debate.4 In 1975 Congress commissioned a feasibility study to explore the potential for a military seizure of the oil fields of the Gulf, in case the crisis should ever he repeated. The report concluded that such an action would be both practically and strategically unwise, for the fields would likely be damaged in any such operation, and assuring their long-term viability would probably prove costlier than any benefit that could be gained from their possession.3 Political scientist Robert Tucker was hardly alone when he noted with some amazement that the crisis was resolved in the absence of any meaningful threat of force. “Suddenly,” he wrote, “we find ourselves in a strange universe,” where 20th century Melians could withhold a vital product from the Athenians of the day.6 The United States was not the only inhabitant of this bizarre world—Tucker noted in 1981 that the Soviets too had proven to he oddly cautious and tenta tive in their actions in the Gulf.7 As it turns out, Moscow had come to the same conclusions as Washington about the feasibility of seizing Arab oil. Even though the Soviets had the obvious advantage of proximity and a massive imbalance in available forces in the region, they did not seem to ever have seriously considered making such a move. Military power played no role in the resolution of the 1973 crisis, nor did it factor into oil politics in any serious way during the Cold War. In fact, as a general rule force has not proved to he useful in oil politics. There has never been a war to control territory that contains fossil fuels, and there are good reasons to believe it is Likely that there never will he. The conventional wisdom concerning the inevitability of energy wars is probably wrong.

#### No impact to oil shocks.

Victor ‘7

David Victor, David G. Victor is a professor of law at Stanford Law School and the director of the Program on Energy and Sustainable Development, November 12, 2007, What Resource Wars?, http://www.nationalinterest.org/Article.aspx?id=16020

RISING ENERGY prices and mounting concerns about environmental depletion have animated fears that the world may be headed for a spate of “resource wars”—hot conflicts triggered by a struggle to grab valuable resources. Such fears come in many stripes, but the threat industry has sounded the alarm bells especially loudly in three areas. First is the rise of China, which is poorly endowed with many of the resources it needs—such as oil, gas, timber and most minerals—and has already “gone out” to the world with the goal of securing what it wants. Violent conflicts may follow as the country shunts others aside. A second potential path down the road to resource wars starts with all the money now flowing into poorly governed but resource-rich countries. Money can fund civil wars and other hostilities, even leaking into the hands of terrorists. And third is global climate change, which could multiply stresses on natural resources and trigger water wars, catalyze the spread of disease or bring about mass migrations. Most of this is bunk, and nearly all of it has focused on the wrong lessons for policy. Classic resource wars are good material for Hollywood screenwriters. They rarely occur in the real world. To be sure, resource money can magnify and prolong some conflicts, but the root causes of those hostilities usually lie elsewhere. Fixing them requires focusing on the underlying institutions that govern how resources are used and largely determine whether stress explodes into violence. When conflicts do arise, the weak link isn’t a dearth in resources but a dearth in governance.

#### No wars to secure oil—not perceived as within the countries’ interests

Fettweis ‘11

Christopher, Professor of Political Science @ Tulane Ch. 9: Is Oil Worth Fighting For? Evidence from Three Cases," in "Beyond Resource Wars," edited by Shlomi Dinar International Relations Professor at FIU, 2011, Googlebooks, AD 3/21/12

Even though the Gulf has been of vital strategic significance for the past fifty years, there has never been a time when a great power war to assure access to its riches seemed imminent. Over and over again, the outside powers have acted as if they felt that the imperative to avoid direct confrontation outweighed even the potential value of the Gulf’s riches (Reich 1987; Breslauer 1990). If historical trends are any indication of future potential, radical changes would have to occur to break the interconsumer stability that exists regarding the Persian Gulf at the beginning of the twenty—first century. As the following sections should make clear, all regional trends indicate that much more likely short- and long—term scenarios involve cooperation among consumers (as well as between consumers and producers), rather than war between the great oil-thirsty powers. Four times in the past—in 1 973, 1979, 1990, and 2003—incidents occurred that are instructive for those seeking insight into international behavior in oil—rich regions. 1973 It is probably not much of an exaggeration to suggest that the modern oil era began as the Yom Kippur War drew toward a conclusion. The Arab oil embargo that followed rudely awakened the West to the extent and depth of its dependence on the Persian Gulf. Rather than create divisions among the great importing powers, however, the Arab states helped to solidify the notion that the real geopolitical chasm in the Persian Gulf separates consumers from producers.

#### We control uniqueness –war and resource-based conflicts declining

Fettweis ‘09

Christopher, Professor of Political Science @ Tulane "Ch 5 No Blood for Oil: Why Resource Wars Are Obsolete," p. 66-75 in "Energy Security Challenges for the 21st Century: A Reference Handbook," Edited by Gal Luft, executive director of the Institute for the Analysis of Global Security and Anne Korin, co-director of the Institute for the Analysis of Global Security, 2009.

International precedents for oil exploitation certainly suggest that future re source competition issues could be settled peacefully. In fact, war has never broken out over the ownership of oil deposits, even when that ownership was hotly contested. There are a few rather significant, disputed fields that have been discovered in the past few decades, from the North Sea to the Gulf of Mexico to the Caspian Sea.23 In all cases, agreements have been reached to develop the oil and gas fields without conflict. Of course peaceful precedents do not guarantee peaceful futures—Norway and the United Kingdom are obviously quite different from China and Taiwan—but still it is worth noting that when vast offshore hydrocarbon fields have been discovered before, despite the energy autarky and billions of dollars at stake, lasting agreements have emerged that benefit all parties. Despite the fact that the strategic and economic importance of oil grew steadily throughout the past century, there has never been a time when states have deter mined that assuring access to petroleum was worth the risk of war. The final and perhaps most important reason to not expect a rise in resource wars in the next century is due to what may be the most under-reported—and perhaps counter-intuitive—phenomenon in international politics: War is disappearing from the planet. A number of both academics and practitioners, from Richard Nixon to John Mueller, have argued for years that due to a combination of nuclear weapons, economic interdependence, institutions and the evolution in ideas, major war has become all but obsolete.24 Apart from an occasional Cod War,” argued Samuel Huntington, wars in the industrialized north are “virtually unthinkable.”25 1f it is true that war is obsolete for the strongest of powers-and a growing number of experts believe that it is—then the weakest can reasonably hope that it will soon be for them too, as their societies and economies develop, and as they adopt the institutions, technology and ideas of the industrialized world.26 As a result of something akin to a trickle-down effect for peace, conflict may well wane everywhere as the post-Cold War era unfolds. This utopian future seems to be unfolding, if the data on global warfare can be believed. Figure 5.1 outlines what may turn out to be one of the more astonishing developments in human history: the decline of war as an instrument of policy. Major wars tend to be quite memorable, so there is little need to demonstrate that there has been no such conflict since the end of the Cold War. But the data seem to support the trickle-down theory of stability as well. Every extant empiri cal analysis of warfare has found that the frequency and intensity of all types of wars—interstate, civil, ethnic, revolutionary etc—declined throughout the 1990s and into the new century after a brief surge of postcolonial conflicts in the first few years after the collapse of the Soviet Union.27 The magnitude and intensity of warfare is steadily declining. At the end of 2007, Africa is more peaceful than it has ever been (despite its other problems); Europe, South America, and most of Asia are the same. Although no one seems to have noticed, warfare—whether over resources or anything else—is disappearing from the Earth. For resource wars to become a reality, not only would substantial economic incentives for peace and the common interest of consumers and producers have to be overcome, but also international trends of peaceful conflict resolution would have to he reversed. If indeed conflict is becoming a rare event, then the risk of war over oil in the coming century is even lower than it would have been other wise. And that risk was probably never particularly high.

#### It’s in the common interest of states to prevent war

Fettweis ‘09

Christopher, Professor of Political Science @ Tulane "Ch 5 No Blood for Oil: Why Resource Wars Are Obsolete," p. 66-75 in "Energy Security Challenges for the 21st Century: A Reference Handbook," Edited by Gal Luft, executive director of the Institute for the Analysis of Global Security and Anne Korin, co-director of the Institute for the Analysis of Global Security, 2009.

Today oil is traded on a global market—supply disruptions anywhere affect the price everywhere. It is of course the price of oil is that is most clearly cor related with economic performance in consumer and producer suites alike. Al though their interests diverge on precisely what that price should be—producers want it to be relatively high, and consumers relatively low—they both want to see it remain fairly stable Any war in a resource-rich area that would disrupt the supply and raise the price would prove to be counterproductive. A certain amount of predictability is necessary to assure that disruptions in price, the kind that have far-reaching implications for an entire economy, do not occur. in order for any energy company to be interested in developing the resources of this region, jurisdictional issues must be settled. As long as higher risks mean higher costs, the perception of instability will remain an important factor driving potential investors away from energy resource development.’9 No state is able to benefit from oil and gas fields until ownership issues are settled. Oil does no one any good in the ground. In order for any country to profit from owning large stocks, it must sell. Control over the territory that contains oil is therefore hardly necessary to assure access to its resources. Whoever controls the territory where oil is extracted will face the same incentives to sell it on the world market. States of the 21st century may well reach the conclusion that it does not much matter who controls oil, as long as those who do seem willing to sell it. No matter who is in charge of Saudi Arabia, or Kuwait, or the UAE, for example, there is every reason to believe that they will have strong incentives to sell their oil to the industrialized consumer states. In one of the very few studies of the issue, political scientist Shibley Telhami found that “a change in regime from moderate to radical in one state does not appear to alter the pattern of that state’s foreign trade.”2° Throughout the Cold War, the nature of Gulf regimes had little or no impact on who they traded with, or how much. In other words, market forces have a greater impact than national policy in determining the flow of oil. Even the 1980—88 Iran-Iraq war failed to have much of an impact on oil production, despite the fact that much of the fighting occurred within artillery range of major oil terminals and facilities.2’ Even if profoundly unfriendly regimes were to come to power in the Persian Gulf or in any other oil-producing region, they would still need to sell their oil. Any government determined to act with profound economic irrationality would be quickly displaced by those eager to maximize the amount of oil revenue coming into their country Also, unlike in 1973 when boycotts could target individual countries, today the oil companies control distribution and will make adjustments to keep their customers satisfied and protect their profits. The market will bring stability perhaps better than that currently provided by the over-strapped U.S. taxpayer.22 Oil-producing countries have an interest in keeping the price high; consumer states wish to see it low. Both, however, want it to keep flowing, instability in oil-producing regions prevents that from happening. The fact that there no one on either side has an interest in seeing the spigot turned off provides powerful, stabilizing incentives encouraging the peaceful development of these resources.

### AT: Peak Oil

#### The world has enough reserves of oil to last for hundreds of years.

Caruba in ‘5

(Alan, author of "Warning Signs", published by Merril Press. He writes a weekly column posted on the Internet site of The National Anxiety Center. "Thwarting America's Energy Needs," CapMag.com, February 17, 2005 .http://www.capmag.com/article.asp?ID=4140)

And surely the world is running out of oil, right? Wrong! The world has plenty of oil, enough says the US Geological Survey to last for at least the next several hundred years or longer. Worldwide, there are 14,000 billion barrels of crude oil reserves. In its “World Petroleum Assessment 2000” report, the global reserves of crude oil were estimated to be some 3,000 billion barrels. A really good reason to annex Canada, for example, would be recent reports that its oil reserves now total more than 180 billion barrels, most of which would be found in economically recoverable oil-tar sand deposits. By contrast, Saudi Arabia’s reserves are estimated at 264 billion barrels. US oil-shale reserves are estimated to be sufficient to provide a hundred percent of our crude oil consumption at current rates for more than 200 years! The big IF is whether government will get out of the way and let energy producers get at it and refine it and sell it to us.

#### Oil fields are refilling themselves.

Cooke in ‘5

(Robert. "Oil Fields Are Refilling... Naturally - Sometimes Rapidly. There Are More Oil Seeps Than All The Tankers On Earth," Newsday (Rense.com), April 10, 2005.)

Deep underwater, and deeper underground, scientists see surprising hints that gas and oil deposits can be replenished, filling up again, sometimes rapidly. Although it sounds too good to be true, increasing evidence from the Gulf of Mexico suggests that some old oil fields are being refilled by petroleum surging up from deep below, scientists report. That may mean that current estimates of oil and gas abundance are far too low. Recent measurements in a major oil field show "that the fluids were changing over time; that very light oil and gas were being injected from below, even as the producing [oil pumping] was going on," said chemical oceanographer Mahlon "Chuck" Kennicutt. "They are refilling as we speak. But whether this is a worldwide phenomenon, we don't know."

### AT: US-Russia War

#### No chance of U.S.-Russia war

Perkovich 3 (George Perkovich, Vice President for Studies–Global Security and Economic Development at the Carnegie Endowment for International Peace, March/April 2003, Foreign Affairs)

As for Russia, a full-scale war between it and the United States now seems inconceivable. Given the desires for larger cuts in nuclear forces that Russia displayed in negotiating the 2002 Moscow Treaty, Russia hardly seems enough of a threat to justify the size and forward-leaning posture of America's present arsenal.

#### No scenario for any conventional war going nuclear between the U.S. and Russia

Manning 0 (Robert Manning, Former C.V. Starr Senior Fellow for Asia Studies, and Director, Asia Studies, Council on Foreign Relations, March 10, 2000, The Washington Post)

We don't want to go any lower because we need these weapons for nuclear deterrence, according to State Department spokesman James Rubin. But how many nukes do we need for deterrence to be credible? China, which President Clinton has talked of as a "strategic partner," has a grand total of 20 - count them - strategic warheads that could hit the United States. Nuclear wannabes like North Korea, Iran, and Iraq would have only a handful if they did manage to succeed in joining the nuclear club. Russia, which has 6,000 strategic warheads, is no longer an adversary. During the Cold War, it was not hard to envision a conventional war in Europe escalating into nuclear conflict. But today it is difficult to spin a plausible scenario in which the United States and Russia escalate hostilities into a nuclear exchange. Russia has no Warsaw Pact, and not much of a conventional force to speak of. Yet U.S. nuclear planners still base their targeting plans on prospective Russian targets, though no one will say so.

### AT: Indopak

#### Indo-Pak war won’t happen.

Duke University 2 (6-4, http://today.duke.edu/2002/06/indiatip0602.html, 6-27-11, AH)

Though India and Pakistan probably will never agree on who should control the Kashmir region, it is highly unlikely the two South Asian neighbors will resort to nuclear war to resolve their dispute, says a Duke University professor emeritus who has been researching Pakistan since 1957. "While they have serious divisions, the Indian and Pakistani regimes are rather rational on this matter," said Ralph Braibanti, James B. Duke Professor Emeritus of Political Science. "Even though there is saber rattling going on, I doubt very much they would use nuclear weapons." Steven Wilkinson, an assistant professor of political science at Duke, also thinks the chance of a nuclear outbreak is low as long as India does not mount a full-scale invasion. Pakistan, whose conventional military forces are far weaker than India's, would be the most likely country to initiate a nuclear strike if it felt defeat were imminent, Wilkinson said. As a result, "India recognizes that anything more than a 'limited' strike into Pakistan and Pakistan-held Kashmir poses serious risks," said Wilkinson, who teaches about ethnic identity and conflict resolution in South Asia.

#### India-Pakistan war won’t happen and won’t escalate even if it does

LIMAYE 2003(Satu, director of research at the Asia Pacific Center for Security Studies, Asia Times, Jan 8, http://www.atimes.com/atimes/South\_Asia%5CEA08Df02.html)

Kashmir's dangers and costs are sobering, but should not be overdrawn. Brinksmanship is used by all parties to purpose. Weaker Pakistan ratchets up tensions to gain US pressure on India to negotiate. India uses coercive diplomacy to get US pressure on Pakistan to halt the infiltration of militants. Both seek these ends without war: Pakistan because it might lose; India because it might not win. Each wants the US to hold them back, while pushing their interests forward. Militants use dramatic attacks to loosen India's grip on Kashmir, and warn Pakistan against reducing commitment to their cause. Outsiders use acute tensions to leverage influence. Tensions employed carefully are creative. Outsiders should not be "guided by vanities" that they are the most important bulwark against war. Nor should the negative implications of nuclear war in the subcontinent be exaggerated. Horrific as the humanitarian costs would be, they must be set against the staggering existing humanitarian challenges in the region. Second, many feared that India and Pakistan's 1998 nuclear blasts would unhinge the nuclear order. They did not. Similarly, if India and Pakistan use nuclear weapons, other countries involved in disputes with their neighbors will not necessarily follow. A nuclear war in the subcontinent could give a fillip to nonproliferation efforts. Resolving Kashmir would remove a nuclear flashpoint, but not the capabilities and underlying antagonisms that make nuclear war possible.

### AT: Food Prices

#### Several reasons for high food prices

Forbes ’12 3/15/2012 Steve Odland, Contributor Forbes Magazine www.forbes.com

Why Are Food Prices So High? Food prices have skyrocketed over the past couple years. While overall U.S. food prices rose about 5% [last](http://www2.tbo.com/news/business/2011/nov/28/food-prices-expected-to-keep-rising-in-2012-ar-327747/%27) year, earlier in the year food inflation was the [highest](http://www.cbsnews.com/2100-500395_162-20043737.html) recorded in 36 years. The USDA sees food prices [rising](http://www.marketwatch.com/story/usda-still-sees-2012-food-prices-rising-25-35-2012-02-23) 2.5%-3.5% in 2012 but many believe that inflation could be much higher. This is concerning since the economy is not rocketing and interest rates are near zero. Historically, food was a local issue as supply chains were short. Food supply and demand were largely functions of local crop conditions impacted by weather, growing conditions, pests, etc. Over the past century, supply chains and preservation have improved so that the food trade has become international. Commodities, crops, and finished goods are traded globally. This trade has stabilized prices when local weather or growing conditions are impacted. But rising populations, largely in Asia, have created demand for crops and finished good from other parts of the world, and have impacted prices. As every student of economics knows, price is a function of supply and demand. When demand for a commodity rises on constant supply, prices usually rise. Conversely, when demand falls at constant supply, prices usually fall. The same thing works with supply. Rising supply on constant demand causes a fall in prices while falling supply on constant demand causes prices to increase. So one could conclude that rising food prices have been caused by falling supply or increased demand. This is true, but there is a lot going on behind the scenes causing this. What’s going on? 1) China and India have the largest and fastest growing populations creating demand for food from around the world. So one impact on prices has been rising demand from these countries, especially China. 2) The Japanese tsunami and earthquake last year drove up seafood [prices](http://latimesblogs.latimes.com/money_co/2011/12/food-prices-will-continue-to-rise-in-2012-says-usda.html) by nearly 6%. 3) Vegetable prices [rose](http://www.cbsnews.com/2100-500395_162-20043737.html) 50% in the past month. Crop damage in Australia, Russia, and South 4) Government subsidized and mandated ethanol use has increased the demand for corn and reduced acreage dedicated to food thereby pushing food prices up. A Congressional Budget Office [report](http://www.forbes.com/sites/steveodland/2012/03/15/why-are-food-prices-so-high/04-08-ethanol.pdf) concluded that the increased use of ethanol accounts for 10-15% of the increase in food prices. 5) Changes in government subsidies for crops other than corn for ethanol impact food prices. 6) Regulations restricting use of herbicides, pesticides, fertilizers, etc., while positive on some fronts, may result in poorer crop yields. 7) Increased oil prices drive up costs for transportation, fertilizer, plastic packaging and inks used to print packaging. 8) In some areas of the U.S., the government is paying farmers not to [plant](http://www.nytimes.com/2011/10/24/science/earth/24water.html?pagewanted=alla) to save water. This reduces food supply. 9) Drier and hotter weather trends in farming areas generally reduce crop yield and drive prices higher. 10) Import tariffs and export taxes [distort](http://www.marketplace.org/topics/business/countries-alter-food-prices-tariffs) supply and demand, and hence food prices around the world. The interaction of different commodity prices also is interesting. For instance, the demand for corn and soybeans in China has pushed up the [prices](http://www2.tbo.com/news/business/2011/nov/28/food-prices-expected-to-keep-rising-in-2012-ar-327747/) of eggs here in the U.S. The grain costs account for about half of the 23% rise in egg prices last year. The balance of the cost increase is due to fewer laying hens. The rising costs of grain for feedstock have increased prices on beef and pork. Advanced Economic Solutions, an economic research firm has predicted that beef prices will [rise](http://abcnews.go.com/Business/global-food-prices-rise-percent-us-consumer-products/story?id=15880382#.T2DoWZjEU0A) 12% in 2012. Food manufacturers are doing everything they can to cut costs and avoid price increases. These aggravate retailers who bear the cost of changing the pricing throughout their system and negatively affect consumer volume. As a result, many manufacturers who held off on increases have needed to take larger increases than normal to catch up resulting in sticker shock. For example, [Kraft Foods](http://www.forbes.com/companies/kraft-foods/) [raised](http://abcnews.go.com/Business/global-food-prices-rise-percent-us-consumer-products/story?id=15880382#.T2DoWZjEU0A) prices 7.6% worldwide in the last quarter of 2011. Some people think that rising food prices are a good sign because historically this has meant the economy is recovering. But that isn’t necessarily true anymore. Rising prices in the U.S. are less driven by the economy here and more driven by the economic recovery and growth elsewhere. The result is a slowly recovering economy in the U.S. but higher inflation than usual. This, in turn, could require the Federal Reserve to take action to stem rising inflation by raising interest rates, and that could stagnate economic growth. This kind of situation with low economic growth, high unemployment, and rising prices is called “[stagflation](http://en.wikipedia.org/wiki/Stagflation)” and was last seen here in the late 1970s. Impacts from weather and natural disasters will ebb and flow over time and population growth will continue. But policy changes like ending ethanol subsidies, eliminating or moderating other crop subsidies, moderating regulation on herbicide use, eliminating food tariffs/taxes, allowing more water use for agriculture, etc. all could help lower food costs. Finally, actions to lower oil prices could help food inflation. It seems likely that, given all these factors, food price inflation will continue in 2012. This, on top of rising gas price, will hurt the American consumer and may play a role in the upcoming election.

#### Alt Causes to Food—Natural Disasters

New York Times ‘11

Food Prices Hit Record High, Spurring Worries About Global Unrest By NATHANIAL GRONEWOLD of [Greenwire](http://www.greenwire.com" \t "_blank) Published: March 3, 2011 UNITED NATIONS -- Food prices are continuing their global surge, raising the specter of unrest in developing nations. The global food price index hit a new record high for the third straight month, the Rome-based Food and Agriculture Organization said today. The index averaged 236 points in February, 2.2 percent higher than the previous all-time high set in January. The index averaged 90 when FAO first began tracking world food prices in 1990. February's monthly high is 36 points higher than the average for all of 2008, when soaring prices sparked rioting and food-export bans in some developing nations. The index -- a compilation of price data for sugar, cereals, oils, meat and dairy products -- has gradually risen every month for the past eight months. The trend began last July, when summer floods in Pakistan, droughts in Australia and Canada, and wildfires in Russia shrank global food stores and saw market speculators return in force to commodities. News of fresh spikes in food prices also comes on the heels of crude oil reaching $100 a barrel. U.S. crude oil futures prices closed above the century mark for the first time in three years at the close of trading Tuesday. Wheat prices soared in February on U.S. commodities exchanges, but they have since fallen back to January levels. Meanwhile, corn prices continue to climb, rising by around 33 percent since December 2010. FAO and other food market experts are starting to acknowledge that biofuel policies supporting the ethanol industry in the United States are a strong factor behind the rise of corn prices. Soybean prices have fallen slightly after steadily rising since December. Cereal prices rose 3.7 percent over January averages. Meat and dairy prices expanded by 2 percent and 4 percent, respectively. FAO officials say the world can expect further price rises if oil prices continue climbing. "Unexpected oil price spikes could further exacerbate an already precarious situation in food markets," FAO's director of trade and markets, David Hallam, said in his agency's report. "This adds even more uncertainty concerning the price outlook just as plantings for crops in some of the major growing regions are about to start." During the last record run-up in world food prices, FAO hosted a series of conferences aimed at encouraging governments to support agricultural development in poor countries, but there has been little follow-up. Nations are now in the midst of negotiations on possible changes to the Food Aid Convention, a treaty that governs how countries distribute food aid. Eighty percent of that aid goes toward emergencies rather than malnutrition programs as was common in the past. The United Nations wants rich governments to focus more development aid dollars toward helping poor countries improve their own domestic agriculture sectors and markets. U.N. officials also want the United States to donate more food aid in the form of direct purchases from developing countries close to crisis points, rather than the current congressional mandate that almost all food aid be bought in the United States and shipped from there. The World Food Programme estimates that the cost of purchasing and shipping U.S. food to crises eats up roughly half the value of all U.S. food aid.

#### Lack of corn to blame for high food prices

Associated Press ‘11

Food prices likely to remain high as corn supply lags By Christopher Leonard, Associated Press Updated 12/9/2011 12:20 PM ST. LOUIS–

The [U.S.](http://content.usatoday.com/topics/topic/U.S) government barely changed its estimate for next year's corn surplus, which is expected to stay small and keep high food prices high. The [Department of Agriculture](http://content.usatoday.com/topics/topic/Organizations/Government%2BBodies/United%2BStates%2BDepartment%2Bof%2BAgriculture) estimated Friday that farmers will have 848 million bushels of corn on hand at the end of next summer. That's up less than 1 percent from last month's forecast. Next year's surplus would satisfy demand for fewer than 25 days. A 30-day supply is considered healthy. Higher corn prices have pushed overall food inflation up this year. Corn is an ingredient in everything from animal feed to cereal to soft drinks. The [USDA](http://content.usatoday.com/topics/topic/USDA) expects food prices to have increased 4.5% in 2011. They estimate prices will rise as much as 3.5% next year. Fears of a corn shortage pushed the price to a record high of $7.99 a bushel in June. Corn prices have eased slightly since then to around $6 per bushel. Corn traded for about $2 a bushel for several years until 2005. Government mandates and subsidies that year helped the ethanol businesses expand. The surplus is at historically low levels because of increased demand from ethanol makers and also from livestock producers. Separately, the USDA said it expected the soybean surplus to be about 18% bigger in 2012 than it thought last month. Farmers are expected to have 230 million bushels on hand. That's about a 28 day supply. While not abundant, most traders don't consider that level a shortage, said [Jason Ward](http://content.usatoday.com/topics/topic/Jason%2BWard), an analyst with analyst with Northstar Commodity in Minneapolis. Soybeans traded for more than $14 a bushel this summer, but now trade around $11.30 a bushel.

#### High food prices can be attributed to Wall Street

Maxfield, Daily Finance ‘12

Wall Street to Blame for High Food Prices 5/30/12 By John Maxfield, Daily Finance http://www.dailyfinance.com/2012/05/30/high-food-prices-blame-wall-street/

High Food Prices? Blame Wall Street. It's not your imagination -- food prices are going through the roof. According to the United Nations, the average price of food has increased a staggering 77% since the beginning of 2006. What used to be a $50 trip to the grocery store six years ago will now set you back $89. We've been told that this increase is a result of three factors: heightened demand from developing countries like China, the use of corn and other products to produce ethanol, and the increased price of fossil fuels. High food prices, in other words, are simply a consequence of supply and demand -- the benign and unbiased forces of capitalism. The problem with this explanation is that it's incomplete and misleading. While those factors do influence the price of food, they have also been seized upon by interested parties to mask a more powerful and pernicious force behind the skyrocketing trend: Wall Street. When the market set food's price The commodity futures market has operated in relative obscurity for much of its existence, familiar only to a small group of producers, consumers, and traders centered in Chicago. Farmers and other producers use it to sell futures contracts at the beginning of planting season to hedge against a decline in crop prices prior to harvest. Consumers like restaurant chains and supermarkets -- think McDonald's (NYS: [MCD](http://www.dailyfinance.com/quotes/MCD/usa)) and Whole Foods (NAS: [WFM](http://www.dailyfinance.com/quotes/WFM/usa)) , among others -- buy contracts at the same time to hedge against the risk that prices will increase. And traders act as intermediaries by buying contracts from producers and then reselling them to consumers for a profit. The size of the futures exchange has accordingly always paled in comparison to the size of the world's equity and bond markets. In 2004 and 2005, for instance, the latter accounted for $43.6 trillion and $54.3 trillion in market capitalization, respectively. Meanwhile, the futures exchange was only $183 billion in size, less than 0.2% of the other two combined. Given the nature of the market participants, prices of commodities have traditionally tracked the supply and demand of the underlying products. Excluding the last few years, for instance, the price of corn only accelerated when there was a supply shock: The abrupt spike in 1988 corresponds to one of the worst droughts in U.S. history, and the massive spike in the mid-1990s corresponds to disastrous crop failures in China. In addition, commodity prices were rarely positively correlated with each other. If the price of corn was high one year, farmers would plant more of it and less of, say, soybeans the following year. The resulting increase in the supply of corn would drive its price down, whereas the decrease in the supply of soybeans would drive its price up. This give-and-take pattern ensured that there would never be a sustained deficit of one crop or another, providing a near-textbook example of the virtues of a free market. And then Wall Street intervened... The financial wizards of Wall Street paid scant attention to the commodity futures market prior to the turn of the 20th century. Its measly size made it appear unworthy of their consideration. And even if it had been sufficiently large, many of the financial industry's most lucrative clients -- institutional investors -- preferred to avoid investing in it anyway. All of this changed with the confluence of three developments in the early 2000s. First, institutional investors developed an appetite to diversify away from equities after suffering through the tech bubble, the 9/11 attacks, an ensuing recession, and the Enron and Worldcom debacles. Second, and at about the same time, a series of academic papers discovered that commodity returns inversely correlated to equity returns. And finally, spurred on by these developments, financial institutions like Goldman Sachs (NYS: [GS](http://www.dailyfinance.com/quotes/GS/usa)) , American International Group (NYS: [AIG](http://www.dailyfinance.com/quotes/AIG/usa)) , and UBS (NYS: [UBS](http://www.dailyfinance.com/quotes/UBS/usa)) constructed indexes that made it easier to track and invest in commodity futures. The two most popular indexes are the Standard & Poor's Goldman Sachs Commodity Index and the Dow-Jones UBS Commodity Index. The first tracks 24 commodities weighted according to worldwide production value and is thus heavily influenced by energy products. The second tracks 19 commodities, 18 of which it shares with the S&P-GSCI, weighted according to worldwide production and liquidity factors. To provide actual exposure to these indexes -- since you can't invest in an index itself -- investment banks used swaps, the now-infamous derivatives that crippled the financial system in 2008. In a typical commodity swap agreement, an institutional investor agrees to pay the three-month Treasury-bill rate plus a management fee to a Wall Street bank, and the bank agrees to pay the total return on either the S&P-GSCI or the DJ-UBS. To hedge their positions, investors can invest the notional amount of the swap in three-month Treasury bills, while the banks can invest in futures contracts that replicate the targeted index. The capital that flowed into the commodities futures market as a result of these agreements resembled a veritable tsunami. The total open interest of the 25 commodities included in the S&P-GSCI and DJ-UBS indexes went from $183 billion in 2004 to $356 billion by 2008. For comparison, this would be equivalent to flooding $12 trillion into the S&P 500. Not surprisingly, in turn, the increased demand for futures contracts corresponded with the dramatic increase in their price. And as you can see below, to stick with corn as a representative example, institutional ownership is now a leading indicator of its price. Wall Street and the price of food At the end of the day, there's no question that factors like ethanol production influence the price of commodities and, thereby, food. At the same time, however, a bigger and less benign force is at work. Indeed, it evidently wasn't enough that investment bankers and their ilk on Wall Street crashed our credit system and contributed to the artificial creation and subsequent destruction of trillions of dollars of home equity. They've now taken it upon themselves to manipulate and control the world's supply of food.

### Coersion Links

#### Plan is coercion

**Mariano 08**, “Proposed expansion of Public Transportation in South Florida is Misguided.” http://www.stateofsunshine.com/2008/07/15/proposed-expansion-of-public-transportation-in-south-florida-is-misguided/

We need to put to bed the silly rationale that we are “saving” the environment by virtue of the State’s expansion of the public transportation system on within Florida. **It’s nothing more than a red-herring argument made by those who ultimately want to control our mobility and penalize automobile usage, absent any concrete evidence that these proposed additions to public transit will result in any tangible effects on our planetary climate or local environment, let alone our own personal health. If you view congestion as an intolerable feature of modern suburbia, perhaps it’s time for you to relocate to a less congested area** within Florida. And **let’s not forget that you always have the option to leave the state, as increased numbers have been doing of late. In other words, let people vote with their feet, and let individuals decide what the best mode of transportation is for their own personal needs. These types of public-transit expansions are inherently coercive of masses of taxpayers who want no part of them**.

#### Rail is economic coercion—citizen opinions are rejected

O’ Toole 07. “Debunking Portland: A Public Transit Myth.” http://www.cato.org/pub\_display.php?pub\_id=8643

Unless they had gone out of their way on their junket, the visiting dignitaries were unlikely to hear the other side of the stoy: Portland's public transit has done nothing to relieve the region's growing congestion; **its high cost has sparked a taxpayer revolt; the developments along the rail lines were themselves heavily subsidized; and those subsidies led a crafty cabal of ex-politicians and developers to milk the system for their own gain**. How do **Portland-area residents** feel about local light-rail projects? They **voted against raising taxes to build more light-rail** in 1998. In 2002, **they voted against a ballot measure increasing neighborhood densities — as transit-oriented developments do**. In 2004, **they supported a property-rights measure that challenged the very foundations of Oregon's land-use planning system. Planners have ignored all these votes and are building light rail with tax-increment financing and other hidden tax increases.**

#### Public transit robs non-users of billions of tax dollars.

**Love, Cox 91** (roflcopter) “False Dreams and Broken Promises: The Wasteful Federal Investment in Urban Mass Transit” http://www.cato.org/pubs/pas/pa-162es.html

Over the past quarter century, **U.S. taxpayers have pumped more than $100 billion in subsidies into the nation's urban mass transit systems. That massive taxpayer investment has paid for urban public transportation systems that fewer and fewer Americans are using**. Incredibly, **mass transit ridership is lower today--not only as a percentage of commuter trips taken but also in absolute numbers of riders-- than it was in the early 1960s.** Despite the low and declining use of bus and rail systems, federal grants for urban transit now appear to be as popular as ever: bills before both houses of Congress would provide increases of up to 20 percent in public aid for municipal bus and rail systems.