Observation One: Carbon Emissions

Global warming is real and human induced –science agrees  
Anderegg et al 10 – PhD Candidate @ Stanford in Biology  
William, “Expert credibility in climate change,” National Academy of Sciences, p. 12107-12109

Preliminary reviews of scientific literature and surveys of climate scientists indicate striking agreement with the

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credibility of CE and UE groups of climate researchers (Materials and Methods).

The UE group comprises only2%of the top 50 climate researchers as ranked by

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was median expertise (UE = 34 publications; CE = 84 publications).

Warming causes extinction – cutting emissions now is key

Archer et al, ‘8 – Archer lead the study and is a Professor of Geophysical Sciences @ U Chicago, Dozens of other participants, including NASA scientists, professors of Biology, etc. “Anthropogenic Climate Destabilization: A Worst-case Scenario,” Foundation for the Future, September,<http://www.futurefoundation.org/documents/HUM_ExecSum_ClimateDestabilization.pdf>

This summary intends – rather than to duplicate the existing assessments of the Intergovernmental Panel

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global catastrophic risks in which climate change is only one of the problems.

Climate change is comparatively the only existential threat  
Doebbler 11. Curtis, International Human Rights Lawyer. Two threats to our existence. Ahram Weekly. July 2011.<http://weekly.ahram.org.eg/2011/1055/envrnmnt.htm>  
Climate change is widely acknowledged

No other threat -- including war, nuclear disasters, rogue regimes, terrorism,

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and marginalise their neighbours in developing countries. They continue in this vein.

Warming turns every impact  
Burke 8 (Sharon, sr fellow and dir of the energy security project at the Center for a New American Security, Chapter 6 of Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change, edited by Kurt Campbell, p 157-165)

At the same time, however, the implications of both trends for human

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, given the collapse of the MOC, which will compromise agricultural productivity.

Climate change leads to drought and flooding

Muawya Ahmed Hussein 2011 Dhofar University Bureau of Applied Economics & Statistics The Economic,

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areas and is an important hydropower production region. Because of th

Drought results in the death of millions

Aiguo Dai 2010 Ph.D. Atmospheric Science, Columbia University, New York CityM.S. Atmospheric Science, Inst. for Atmos. Phys., Chinese Academy of Sci., Beijing, China Drought Under Global Warming: A review <http://onlinelibrary.wiley.com/doi/10.1002/wcc.81/pdf>  
  
Few extreme events are

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impact of climate change.

Adaptation is only possible for rich countries, assumes linear climate change and ignores biodiversity loss

Hamilton 10 – Professor of Public Ethics @ ANU  
Clive Hamilton, Professor of

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be gone and humans will enter a long struggle just to survive.

Coal is inevitable - CCS is the only viable way to solve for its carbon dioxide emissions

Richard K. Morse 2012 – leads research in global coal markets and global carbon

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most practical ways to make immediate progress in the fight against global warming.

CCS allows for coal with zero emissions – government investment is key to commercial adaptation

Richard K. Morse 2012 – leads research in global coal markets and global carbon

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reservoirs, a practice that would make the economics of CCS more attractive.

Only the plan is modeled – China, India, Brazil, and other countries won’t cut emissions unless they can avoid economic cost

Apt et al 7 – PhD in Physics @ MIT, Professor of Technology, Tepper School of Business and Engineering and Public Policy  
Jay, “Incentives for Near-Term Carbon Dioxide Geological Sequestration,” Carnegie Mellon,<http://wpweb2.tepper.cmu.edu/ceic/pdfs_other/Incentives_for_Near-Term_Carbon_Dioxide_Geological_Sequestration.pdf>  
The Intergovernmental Panel on Climate Change (IPCC)

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are shown in figure 28 below.

Developing countries will “wait and see” until CCS is proven

Global CCS Institute 12 (“Funding Carbon Capture and Storage in Developing Countries,”<http://cdn.globalccsinstitute.com/sites/default/files/publications/37906/fundingccsindevelopingcountriesfinal.pdf>)  
Given the significant, but

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earnings from CCS technology exports”

CCS results in natural gas extraction  
Scientific American 12  
Science Magazine, “Can Fracking and Carbon Sequestration Coexist,” 3/16/12, <http://www.scientificamerican.com/article.cfm?id=can-fracking-and-carbon-sequestration-co-exist>

Natural gas production and carbon sequestration may be headed for an underground collision course.

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impervious rock layer blocking upper migration of injected CO2, the researchers said.

Natural gas accelerates warming – studies prove

Robert W. Howarth et al 11/12/10 - Howarth is the David R. Atkinson Professor of Ecology & Environmental Biology at Cornell University, Renee Santoro is a research aide at Cornell University, Anthony Ingraffea is a professor of Civil and Environmental Engineering at Cornell University (“Methane and the greenhouse-gas footprint of natural¶ gas from shale formations,”http://www.sustainablefuture.cornell.edu/news/attachments/Howarth-EtAl-2011.pdf)

6 Shale gas versus other fossil fuels Considering the 20-year horizon, the

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, where there is little evidence that efficiencies are superior to diesel oil.

Observation two: War wont happen

War is no longer possible – every trend points to peace.

Tertais, ’12 (Bruno - a Senior Research Fellow at the Foundation for Strategic Research and a TWQ editorial board member, former Director of the Civilian Affairs Committee at Assembly of NATO, Ph.D in political science from Institut d'Etudes Politiques de Paris (Summer 2012, The Demise of Ares: The End of War as We Know It?, Center for Strategic and International Studies, The Washington Quarterly, <http://csis.org/files/publication/twq12SummerTertrais.pdf>)  
In 1990, U.S. political scientist

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reached unprecedented lows after 1990.

Humans are biologically peaceful – war is a cultural innovation

John Horgan 6/12/2012 - science journalist and Director of the Center for Science Writings at Stevens Institute of Technology, Hoboken, New Jersey. A former senior writer at Scientific American (1986-1997), he has also written for The New York Times, Time, Newsweek, The Washington Post, The Los Angeles Times, The New Republic, Slate, Discover, The London Times, The Times Literary Supplement, New Scientist, and other publications around the world. He writes regular columns for Scientific American online and BBC Knowledge Magazine, received a B.A. in English from Columbia University's School of General Studies in 1982 and an M.S. from Columbia's School of Journalism in 1983. (“No, War Is Not Inevitable,” Discover Magazine, <http://discovermagazine.com/2012/jun/02-no-war-is-not-inevitable>)  
I have one serious complaint

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also reject the deep-roots theory, which helps perpetuate war.  
  
Prefer broad analysis of international relations – specificity is a logical fallacy  
Kanwisher 89 (Nancy Kanwisher; is a professor of cognitive neuroscience at MIT, was a professor at Harvard, and has a Ph.D. in cognitive sciences; Written December 1989; “Cognitive Heuristics and American Security Policy”;<http://www.jstor.org/stable/pdfplus/173995>; Accessed September 14, 2012)  
In a study of

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to believe that position.

Plan: The United States federal government should substantially increase its fiscal investment in pipeline transportation infrastructure for captured supercritical carbon dioxide in the United States.

Solvency

We’re at 396 ppm, reducing emissions now is key. Failure to do so leads to extreme impacts.

Walsh 12 (July 10th, 2012. Time magazine, Bryan Walsh Is a senior editor for TIME International and the environment writer for TIME magazine. Published New York, New York 2012. Managing editor: Richard Stengel. “Global Warming, The Causes, The Perils, The Solutions”

Everyone knows that we need

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, we have no choice.

Carbon capture is tested and feasible

Anthony et. al '10 [May 2010, Lauren Anthony, Brendon Baatz, Nicholas Bahnken, McKenzie Beverage, Jie Cui, Rose Galer, Devin Hartmaan, Colin Highlands, Howon Kang, Jacob Keating, Meghan Keefer, Kyungwoo Kim, Ashleigh Klingman, Keum Hoo Lee, Katie Mauldin, Richy Palmer, Laura Paradise, Arif Sayik, Burak Uyan, Kelly Wedell, Hasan Qildirin, Ibrahim Yigit, Yonghua Zou are top scholars from multiple disciplines to conduct innovative, timely and relevant research in the broad area of energy, focusing specifically on: • Advanced fossil fuels and nuclear power; • Alternative or renewable energy resources; • Local and regional carbon cycle dynamics; • Environmental and economic consequences of energy production and distribution assembled under the Center for Research in Energy and the Environment of Indiana University, "Carbon Capture and Storage",<http://www.indiana.edu/~cree/pdf/2010%20V600%20Capstone%20Report%20on%20Carbon%20Capture%20and%20Storage.pdf>]  
  
Removing CO2

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pollutants and volatile mercury

CCS storage is technologically available and empirically proven

Dooley and Davidson 10 – leader of the Joint Global Change Research Institute's and the Global Energy Technology Strategy Project's research related to carbon dioxide capture and storage and senior member of the Joint Global Change Research Institute's Integrated Assessment modeling team; Senior Research Scientist. Pacific Northwest National Laboratory, Richland, Washington (JJ and CL, “A Brief Technical Critique of Ehlig-Economides and Economides 2010: ‘Sequestering Carbon Dioxide in a Closed Underground Volume’” US Department of Energy April 2010 <http://www.pnl.gov/main/publications/external/technical_reports/PNNL-19249.pdf>) MLR  
  
The technical feasibility of storing

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and challenges associated with CCS

Pipelines are the missing link – a national network is needed

IRGC 8 - International Risk Governance Council, “Regulation of Carbon Capture and Storage,” <http://www.irgc.org/IMG/pdf/Policy_Brief_CCS.pdf>

Large-scale CCS deployment will require the creation of a regime to manage risks

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levels of investment, potentially inﬂuencing the ultimate organisational structure of the CCS industry

The federal government is key

Horne 10 – JD @ U of Utah Jennifer, “Getting from Here to There: Devising an Optimal Regulatory Model for CO<2> Transport in a New Carbon Capture and Sequestration Industry,” 30 J. Land Resources & Envtl. L. 357, Lexis  
Siting regulations affect

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of requirements for access will be far more workable

Significant and immediate government investment is key

Insight Economics 11“Building Essential Infrastructure for Carbon Capture and Storage,” Report to the Global Carbon Capture and Storage Institute,<http://cdn.globalccsinstitute.com/sites/default/files/publications/13361/development-carbon-capture-and-storage-infrastructure.pdf>  
  
This has ramifications for investment

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substantial contribution from the public sector.

Tons of room for storage

EPA 10 “Report of the Interagency Task Force on Carbon Capture and Storage,” <http://www.epa.gov/climatechange/downloads/CCS-Task-Force-Report-2010.pdf>  
Storage potential is estimated

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for over 1,000 years.