# \*\*\*\*1AC\*\*\*\*

## Plan text: The United States federal government should substantially increase loan guarantees for small modular thermal reactors.

# Contention One is Proliferation

## Nuclear power is increasing globally – demand ensures it’ll be large reactors

**Banks et al, Foreign Policy Energy Security Initiative nonresident fellow, 12-16**

(John P. “Nuclear Power in Developing Countries? Let's Talk about It.” 12-16. <http://www.brookings.edu/research/opinions/2012/12/16-nuclear-energy-banks-massy>. Accessed: 1/1/2013. ADC)

While the developed world gets cold feet on nuclear … of others are seriously considering nuclear power, but commitments are pending.

## This will result in breakout proliferation-asymmetries undermine deterrence and ensure nuclear war-safeguards are key.

(Fast/breakout, checks US influence, miscalc risk (small difference/opaqueness)

**Sokolski, Nonproliferation Policy Education Center Executive Director, 09**

(Henry, June 1, 2009, “Avoiding a Nuclear Crowd”, http://www.hoover.org/publications/policy-review/article/5534, 10/3/12, atl)

Finally, several new nuclear weapons … of this, however, is inevitable.

## US construction is key to solve-SMR’s would out compete other models and a strong domestic industry ensures maintenance of the global gold standard.

**Miller, Bipartisan Policy Co-Chair for the Nuclear Initiative, 12**

(Dr. Warren F. “Pete” e-, Former DOE Assistant Secretary for Nuclear Energy, Senator Pete Domenici, July 2012, “Challenges and Opportunities Facing Nuclear Energy in the United States”, http://bipartisanpolicy.org/sites/default/files/Leadership%20in%20Nuclear%20Energy%20Markets.pdf, 8/14/12, atl)

Several other countries, by contrast, have … development, and deployment (RD&D) programs.

## The plan causes other suppliers to model US practices-ensures no proliferation.

**Sokolski, Nonproliferation Policy Education Center Executive Director, 11**

(Henry, “The Post-Fukushima Arms Race?”, Foreign Policy, July, 29, 2011,http://www.foreignpolicy.com/articles/2011/07/29/the\_post\_fukushima\_arms\_race?print=yesandhidecomments=yesandpage=full, 10/9/12, atl)

A Japanese decision to resist temptation and … has reluctantly in the past.

## Other countries follow the US lead-ensures they’ll pick SMR’s and implement safety measures

**Lieberman, American Physical Society senior government relations specialist, 11**

(Jodi, November 15, 2011 “Nonproliferation, Congress, and Nuclear Trade: Plus ça change, plus c’est la même chose” http://csis.org/files/publication/111116\_nonproliferation\_congress\_and\_nucleartrade.pdf)

U.S. Nonproliferation Influence While 123 … summit will be held in South Korea in 2012.

## Proliferation causes nuclear war-crisis escalation, aggression, saving face, delegation and launch on warning guarantee it.

Kroenig, Georgetown University Government assistant professor, 12

(Matthew, Assistant Professor of Government at Georgetown University and Stanton Nuclear Security Fellow at Council on Foreign Relations, “The History of Proliferation Optimism: Does It Have A Future?,” 5-26-12, http://www.npolicy.org/article.php?aid=1182andrtid=2, accessed 10-2-12, mtf)

The proliferation optimist position… less-resolved opponents to back down.

## Status quo nuclear power will be based off Chinese designs-guarantees accidents and meltdowns

**Tu, Carnegie Energy and Climate Program senior associate, 12**

(Kevin Jianjun. “China’s Nuclear Crossroads.” 3-11. <http://carnegieendowment.org/2012/03/11/china-s-nuclear-crossroads>. Accessed: 9/30/2012. ADC)

It’s first important to acknowledge that … energy-thirsty China can’t afford to make.

## Nuclear accidents wreck biodiversity

Mousseau, USC biology professor, 2011

(TA, “Conservation consequences of Chernobyl and other nuclear accidents”, Biological Conservation Volume 144, Issue 12, December 2011, Pages 2787–2798, Science Direct, ldg)

The explosion at the Chernobyl nuclear power … in species when they are rare.

**Extinction**

**Daily et al, Professor, Department of Biological Sciences Stanford, 7**

(11-19, Gretchen, Senior Fellow, Woods Institute for the Environment Director, Center for Conservation Biology Director, Interdisciplinary Program in Environment and Resources Chair, The Natural Capital Project, “ECOSYSTEM SERVICES: Benefits Supplied to Human Societies by Natural Ecosystems,” <http://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/ForestEconomics/Economics-Daily97.pdf>) atw

In addition to the production of goods, **…**beings trying to colonize the moon.

# Contention Two is Warming

**Newest and most rigorous studies conclude warming is anthropogenic – no alt causes**

**Muller, University of California-Berkeley physics professor, 12**

(Richard A., former MacArthur Foundation fellow, "The Conversion of a Climate-Change Skeptic," 7-28-12, http://www.nytimes.com/2012/07/30/opinion/the-conversion-of-a-climate-change-skeptic.html?pagewanted=all, accessed 8-10-12, mtf)

Call me a converted skeptic. Three years … about what can and should be done.

**Failure to solve warming causes extinction – geological history proves**

**Bushnell, NASA Langley Research Center chief scientist, 10**

(Dennis M. has a MS in mechanical engineering, won the Lawrence A. Sperry Award, AIAA Fluid and Plasma Dynamics Award, the AIAA Dryden Lectureship, and is the recipient of many NASA Medals for outstanding Scientific Achievement and Leadership, "Conquering Climate Change," The Futurist 44. 3, May/Jun 2010, ProQuest, accessed 10-3-12, mtf)

Unless we act, the next century could see … sound, they're actually conservative.

**Ocean acidification destroys marine biodiversity and leads to extinction**

**Romm, MIT Physics PhD, 10**

(Joe, Climate Progress editor, Senior Fellow at the American Progress, Acting Assistant Secretary of Energy for Energy Efficiency and Renewable Energy during the Clinton Administration, PhD in Physics from the Massachusetts Institute of Technology, "Nature Geoscience study: Oceans are acidifying 10 times faster today than 55 million years ago when a mass extinction of marine species occurred," 2-18-10, http://thinkprogress.org/climate/2010/02/18/205525/ocean-acidification-study-mass-extinction-of-marine-life-nature-geoscience/?mobile=nc#more-19529, accessed 10-3-12, mtf)

Marine life face some of the worst impacts. We … **carbon dioxide emissions is now**.

**Sea level rise causes extinction – even small rises matter**

**Sato, Daily Galaxy contributing editor, 8**

Rebecca, Contributing Editor at DailyGalaxy.com, former Head Writer at Freedom FastTrack “Can Changes in Sea Level Cause Periods of Mass Extinction?—A Galaxy Exclusive,” 6-19-08, http://www.dailygalaxy.com/my\_weblog/2008/06/changes-in-sea.html, accessed 10-3-12, mtf)

For years scientists have been trying to … induce. We, as a society, are not.”

**Other nations will model US investment – it’s a bellwether of nuclear tech**

**Adamantiades et al., ICG Aeolian Energy, 9**

(A. Adamantiades, ICG Properties is a real estate development firm; and I. Kessides, The World Bank, "Nuclear power for sustainable development: Current status and future prospects," Energy Policy Volume 37, Issue 12, December 2009, Science Direct, accessed 8-5-12, mtf)

This paper describes the current status and … **other parts of the world**.

**Large-scale nuclear power transition solves warming – assumes resource and time restraints**

**Knapp et al., University of Zagreb professor, 10**

(Vladimir Knapp, Dubravko Pevec, and Mario Matijević, Faculty of Electrical Engineering and Computing, Department of Applied Physics, University of Zagreb in Croatia, "The potential of fission nuclear power in resolving global climate change under the constraints of nuclear fuel resources and once-through fuel cycles," Energy Policy Volume 38, Issue 11, November 2010, Science Direct, accessed 8-22-12, mtf)

In this study, we have investigated the …strategies and for public acceptance of nuclear energy.

**Global commercialization key to check developing countries’ emissions**

**Kessides and Kuznetsov, World Bank chief economist, 12**

(Ioannis N., Development Research Group and The World Bank; and Vladimir, Consultant at The World Bank, "Small Modular Reactors for Enhancing Energy Security in Developing Countries," Sustainability 2012, 4.8, http://www.mdpi.com/2071-1050/4/8/1806/htm, accessed 9-29-12, mtf)

Increasing concerns related to energy … resistance, and reduced financial risk.

**Only the aff solves – alternative sources are of insufficient scope**

**Loudermilk, Institute for National Strategic Studies research associate, 11**

(Micah J., Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, contracted through ASE Inc., "Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs," IAGS Journal of Energy Security, May 2011 Issue, 5-31-11, http://www.ensec.org/index.php?option=com\_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375, accessed 9-29-12, mtf)

Nuclear vs. Alternatives: a realistic picture …expansion of the nation’s nuclear energy portfolio.

**No risk of link turns – complete nuclear power chain significantly reduces CO2 emissions**

**Adamantiades et al., ICG Aeolian Energy, 9**

(A. Adamantiades, ICG Properties is a real estate development firm; and I. Kessides, The World Bank, "Nuclear power for sustainable development: Current status and future prospects," Energy Policy Volume 37, Issue 12, December 2009, Science Direct, accessed 8-5-12, mtf)

2.3. Global climate change In 1990 a major … the environmental effects of fossil fuel pollutants.

# Contention Three is Solvency

## Capitalization is key to nuclear commercialization-only the federal government can leverage the funds necessary

Bennett, Vice President for Public Affairs, Third Way, 10

(Matt, Josh Freed is Director of the Third Way Clean Energy initiative, Jeremy Ershow is a Policy Advisor at Third Way, “Breaking the Nuclear Financing Barrier,” February 10, http://content.thirdway.org/publications/265/Third\_Way\_Idea\_Brief\_-\_Breaking\_the\_Nuclear\_Financing\_Barrier.pdf, accessed 9-30-12, ara)

High financing costs stand in the … budget request to triple the loan volume.

## SMR’s can be commercialized quickly and are safe-studies prove they have multiple advantages

Kessides and Kuznetsov, World Bank chief economist, 12

(Ioannis N., Development Research Group and The World Bank; and Vladimir, Consultant at The World Bank, "Small Modular Reactors for Enhancing Energy Security in Developing Countries," Sustainability 2012, 4.8, http://www.mdpi.com/2071-1050/4/8/1806/htm, accessed 9-29-12, mtf)

SMRs offer a number of advantages that … characterized by significant economies of scale [19].

## NRC will streamline SMR’s

Sullivan, et al., partner, Hogan Lovells’ LLP, 10

(Mary Anne, partner in Hogan Lovells' energy practice in Washington, D.C., Daniel F. Stenger is a partner in Hogan Lovells' energy practice, Amy C. Roma is a senior associate in Hogan Lovells' energy practice, “Are Small Reactors the Next Big Thing in Nuclear?” 12-21-10, <http://www.elp.com/index/display/article-display/3288852302/articles/electric-light-power/volume-88/issue-6/sections/are-small-reactors-the-next-big-thing-in-nuclear.html>, accessed 9-20-12, ara)

The biggest challenge to getting SMRs … initiative through industry working groups.

## SMR’s compete with gas-better risk premium and no volatility

**Rosner, Distinguished Service Professor, Departments of Astronomy and Astrophysics, and Physics – Chicago University, 11**

(Robert e-, Senior Fellow, Computation Institute; Director, Energy Policy Institute; Enrico Fermi Institute; Harris School of Public Policy, Stephen Goldberg, Special Assistant to the Director Argonne National Laboratory, “Small Modular Reactors – Key To Future Nuclear Power Generation In The U.S.”, Energy Policy Institute at Chicago The Harris School of Public Policy Studies, 6/2/12, atl)

In both the 2004 Chicago Study and the current … for nuclear power plants.

## We have the workforce and infrastructure

**Spencer et al, Thomas A. Roe Institute for Economic Policy Studies research fellow, 11**

(Jack. “A Big Future for Small Nuclear Reactors?” Heritage Foundation. 2-02. <http://www.heritage.org/research/reports/2011/02/a-big-future-for-small-nuclear-reactors>. Accessed: 9/7/2012. ADC)

Domestic Production. Although the nuclear i… capabilities—all in the United States.

# \*\*\*\*2AC\*\*\*\*

# T – Sub

## 2. Counter-interp – Substantially

**Random House**, 200**9**

[Dictionary.com Unabridged Based on the Random House Dictionary, "Substantially," http://dictionary.reference.com/browse/substantially, mss]

sub⋅stan⋅tial [suhb-stan-shuhl]

–adjective

1. of ample or considerable amount, quantity, size, etc.: a substantial sum of money.

2. of a corporeal or material nature; tangible; real.

3. of solid character or quality; firm, stout, or strong: a substantial physique.

4. basic or essential; fundamental: two stories in substantial agreement.

5. wealthy or influential: one of the substantial men of the town.

6. of real worth, value, or effect: substantial reasons.

7. pertaining to the substance, matter, or material of a thing.

8. of or pertaining to the essence of a thing; essential, material, or important.

9. being a substance; having independent existence.

10. Philosophy. pertaining to or of the nature of substance rather than an accident or attribute.

–noun

11. something substantial.

# Solvency

## SMRs are safe – invulnerable to natural disaster, and checks prolif threats

Szondy, former university lecturer in history and archeology, 12

(David, award winning freelance writer for Gizmag, a science magazine, February 16, 2012, “Feature: Small modular nuclear reactors - the future of energy?” http://www.gizmag.com/small-modular-nuclear-reactors/20860/, 6/3/12, atl)

SMRs also enjoy a good deal of design … interfere with the operation of the others.

## SMR’s are cost-effective and safe

**Ringle, Oregon State nuclear engineering professor, 2010**

(John, “Reintroduction of reactors in US a major win” 11-13, <http://robertmayer.wordpress.com/2010/11/21/reintroduction-of-reactors-in-us-a-major-win/>, DOA: 11-3-12, ldg)

Small nuclear reactors will probably be the …of SMR designs. Energy Secretary

## We don’t decrease safety, just reduce useless barriers

Ferland, President, Americas Westinghouse Electric Company, 11

(E. James, Jr., bachelor's degree in nuclear engineering from Rensselaer Polytechnic Institute, and a master's in business administration from the Darden School of Business at the University of Virginia “Hearing Before A Subcommittee Of The Committee On Appropriations United States Senate One Hundred Twelfth Congress First Session,” July 14, 2011, http://www.gpo.gov/fdsys/pkg/CHRG-112shrg72251/html/CHRG-112shrg72251.htm, accessed 10-18-12, ara)

On the second issue, we disagree with, … potential for small nuclear technology.

## Plan doesn’t strain the NRC

**NEI 2011**

(Nuclear Energy Institute, “Myths and Facts about Small Modular Reactors (SMRs)”, 6-7, [www.nei.org/filefolder/MythsFacts.pdf](http://www.nei.org/filefolder/MythsFacts.pdf), DOA: 11-4-12, ldg)

UCS statement: “The distributed deployment … any strain on NRC resources.

# Prolif

## Plan solves-reinforces US norms and cradle to grave.

Loudermilk, Institute for National Strategic Studies research associate, 11

(Micah J., Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, contracted through ASE Inc., "Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs," IAGS Journal of Energy Security, May 2011 Issue, 5-31-11, http://www.ensec.org/index.php?option=com\_content&view=article&id=314:small-nuclear-reactors-and-us-energy-security-concepts-capabilities-and-costs&catid=116:content0411&Itemid=375, accessed 9-30-12, mtf)

For years, proponents of nuclear power expansion … distribution of nuclear fuel allayed.

## IAEA underfunded now

**Reuters, 12**

(August 13, 2012, “IAEA cash gap may hinder nuke role, report says”, http://www.jpost.com/IranianThreat/News/Article.aspx?id=273708, 10/19/12, atl)

The United Nations' nuclear … states on a voluntary basis.

# HTGR CP

## Empirics prove HTGRs don’t get commercialized

**Thomas, Greenwich energy studies professor, 2011**

(Steve, “The Pebble Bed Modular Reactor: An obituary”, 1-26, Energy Policy Volume 39, Issue 5, May 2011, Pages 2431–2440, ldg)

1.2. History of the HTGR Up to 1990, four major nuclear … HTRModul concept, has been in operation since 2003.

# Ontology K

## Questioning ontology does nothing-case is a DA to the alt

**Graham, Queensland Graduate School of Management, 99**

(Phil, “Heidegger’s Hippies: A dissenting voice on the “problem of the subject” in cyberspace, Identities in Action! 1999, <http://www.philgraham.net/HH_conf.pdf>, 10/4/12, atl)

Societies should get worried when Wagner’s music becomes … and ontology are the least of all worries.

## Plan focused debate allows reflective analysis- K isn’t a priori

Roger Solt, “What is Debate Theory” Passed out at the MNDI, 1994

It could be argued that **we are a society with too …** affirmative is part of the optimal policy package.

# Apoc Rhetoric K

## Perm do both- recognition of the capacity of catastrophe to forge relations of empathy avoids the alt’s paralysis by foregoing possible solutions

**Recuber, CUNY sociology doctoral candidate, 2011**

(Timothy, “Consuming Catastrophe: Authenticity And Emotion In Mass-Mediated Disaster”, gradworks.umi.com/3477831.pdf, DOA: 11-3-12, ldg)

Recently the trend among scholars and … and consumer culture that disasters generate today.

## Reps don’t come first and don’t cause violence

**Rodwell, Manchester Metropolitan University PhD candidate, 2005**

(Jonathan, “Trendy But Empty: A Response to Richard Jackson”, <http://www.49thparallel.bham.ac.uk/back/issue15/rodwell1.htm>, DOA: 11-8-12, ldg)

In this response I wish to argue that the Post-Structural … set of universals and a heuristic model.

## Fear of extinction is a legitimate and productive response to the modern condition---working through it by validating our representations is the only way to create an authentic relationship to the world and death

**Macy, California Institute of Integral Studies adjunct professor, 2000**

(Joanna, Environmental Discourse and Practice: A Reader, pg. 243, ldg)

The move to a wider ecological sense of self is in large part a …be immune to what we do to other beings.

# \*\*\*\*1AR\*\*\*\*

# Apoc Rhetoric K

## Our framing overcomes disbelief and mobilizes public responses

**Romm, Fellow at American Progress, 12**

(Joe Ph.D. in physics from MIT., 2/26/2012, “Apocalypse Not: The Oscars, The Media And The Myth of ‘Constant Repetition of Doomsday Messages’ on Climate”, <http://thinkprogress.org/romm/2012/02/26/432546/apocalypse-not-oscars-media-myth-of-repetition-of-doomsday-messages-on-climate/#more-432546>, 10/10/12, atl)

The two greatest myths about global … media, intelligentsia and popular culture.

## Threats are real- the causality of their impact is awful

**Ghughunishvili, CEU IR masters, 2010**

(Irina, “Securitization of Migration in the United States after 9/11: Constructing Muslims and Arabs as Enemies”, online pdf, ldg)

As provided by the Copenhagen School …can relate to their speeches.