#### SMRs solve waste – uses it

Szondy ‘12

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SMRs can help with proliferation, nuclear waste and fuel supply issues because, while some modular reactors are based on conventional pressurized water reactors and burn enhanced uranium, others use less conventional fuels. Some, for example, can generate power from what is now regarded as "waste", burning depleted uranium and plutonium left over from conventional reactors. Depleted uranium is basically U-238 from which the fissible U-235 has been consumed. It's also much more abundant in nature than U-235, which has the potential of providing the world with energy for thousands of years. Other reactor designs don't even use uranium. Instead, they use thorium. This fuel is also incredibly abundant, is easy to process for use as fuel and has the added bonus of being utterly useless for making weapons, so it can provide power even to areas where security concerns have been raised.

#### SMR’s are safe

Loudermilk 11

(Micah J. Loudermilk is a Research Associate for the Energy & Environmental Security Policy program with the Institute for National Strategic Studies at National Defense University, “Small Nuclear Reactors and US Energy Security: Concepts, Capabilities, and Costs” Journal of Energy Security, May 2011, <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>, SEH)

Promoting safer nuclear power¶ The debate over nuclear energy over the years has consistently revolved around the central question “Is nuclear power safe?” Certainly, the events at Fukushima illustrate that nuclear power can be unsafe, however, no energy source is without its own set of some inherent risks on the safety front—as last year’s oil spill in the Gulf of Mexico or the long-term environmental consequences of fossil fuel use demonstrate—and nuclear power’s operating record remains significantly above that of other energy sources. Instead, accepting the role that nuclear energy plays in global electricity generation, especially in a clean-energy environment, a more pointed question to ask is “How can nuclear power be made safer?”¶ Although large reactors possess a stellar safety record throughout their history of operation, SMRs are able to take safety several steps further, in large part due to their small size. Due to simpler designs as a result of advancing technology and a heavy reliance on passive safety features, many problems plaguing larger and earlier generations of reactors are completely averted. Simpler designs mean less moving parts, less potential points of failure or accident, and fewer systems for operators to monitor. Additionally, small reactor designs incorporate passive safety mechanisms which rely on the laws of nature—such as gravity and convection—as opposed to human-built systems requiring external power to safeguard the reactor in the event of an accident, making the reactor inherently safer.¶ Furthermore, numerous small reactor concepts incorporate other elements—such as liquid sodium—as coolants instead of the pressurized water used in large reactors today. While sodium is a more efficient heat-transfer material, it is also able to cool the reactor core at normal atmospheric pressure, whereas water which must be pressurized at 100-150 times normal to prevent it boiling away. As an additional passive safety feature, sodium’s boiling point is 575-750 degrees higher than the reactor’s operating temperature, providing an immense natural heat sink in the event that the reactor overheats. Even should an accident occur, without a pressurized reactor no radiation would be released into the surrounding environment.¶ Even on the most basic level, small reactors provide a greater degree of security by merit of providing lower energy output and using less nuclear fuel. To make up for the loss in individual reactor generating capacity, small reactors are generally designed as scalable units, enabling the siting of multiple units in one location to rival the output capacity of a large nuclear plant. However, with each reactor housed independently and powering its own steam turbine, an accident affecting one reactor would be limited to that individual reactor.

#### Obama loses

Hibbs 7/27

(Douglas A., retired professor of economics & political science, author/co-author of five books & dozens of journal articles, & active consultant; July 27, 2012, “Obama’s Re-election Prospects Under ‘Bread and Peace’ Voting in the 2012 US Presidential Election,” PS: Political Science & Politics, forthcoming – Kurr)

The Situation So Far¶ During the first thirteen full quarters of President Obama’s term, 2009:q2 through¶ 2012:q2, which at time of this writing (July 27 2012) covers the most recent quarter for¶ which we have BEA data on the National Income and Product Accounts, the annualized,¶ weighted-average quarterly growth rate of per capita real disposable personal income was¶ only 0.1%; way below the post-1948 average of 1.8%. Over the same period US Fatalities in¶ Afghanistan totaled 1355, amounting to 4.4 per millions of population. Poor real income¶ growth performance all by itself means that Obama is in deep trouble: the Bread and Peace¶ equation estimates in table 1 imply that over-the-term weighted-average real growth must¶ be at least 1.2% for the incumbent’s expected two-party vote share to cross 50%.18¶ Election Day Projections¶ To project Obama’s 2012 vote I’ll make the plausible assumption that American military¶ fatalities in Afghanistan continue running at the (politically relatively low) average¶ quarterly rate of the past year: 95 or 0.3 per millions of population. At Election Day¶ cumulative Fatalities then would amount to approximately 1500 or 4.8 per millions of¶ population, which would depress Obama’s expected two-party vote share by less than a¶ quarter of a percentage point (). Baring a really big escalation in the¶ aggressiveness of fighters resisting US military presence in Afghanistan, plausible¶ alternative assumptions about the flow of American body bags during the next four months¶ would only negligibly affect my projections of Obama’s re-election prospects.¶ Consequently, growth rates of per capita real disposable personal income over the¶ remainder of the term will be the decisive as yet unrealized fundamental factor in the 2012¶ presidential election.¶ Calculations in the table 3 show that according to the Bread and Peace model per capita¶ real income growth rates must average out at nearly 6 percent after 2012:q2 for Obama to¶ have a decent chance of re-election. If the US economy experiences an unanticipated¶ reversal of fortune with growth surging to rates not uncommon in the initial robust phase¶ of recoveries from deep contractions, Obama could squeak out a win, as implied by the last¶ column of table 3. However the pace of recovery from the 2008 Great Recession remains¶ sluggish, and the famous 2009 book This Time Is Different: Eight Centuries of Financial Folly¶ by Carmen Reinhart and Kenneth Rogoff documents how recoveries from contractions¶ originating with the bursting of speculative financial bubbles are not V-shaped as in¶ garden-variety recessions, but instead are typically prolonged U-shaped affairs lasting 5 to¶ 6 years. The univariate statistical properties of postwar per capita real disposable personal¶ incomes indicate that the chances of weighted-average growth on the order of 6% over the¶ one and one-third quarters remaining until Election Day 2012 are no better than 1/10.¶ The protocol of the PS Election Forecast Symposium obliges me to make a specific¶ prediction of the 2012 aggregate voting result. My reading of the tea leaves (statistical¶ forecasts of income and output growth from formal econometric models have proven to be¶ useless) leads me to posit that quarterly, annualized per capita real income growth rates¶ will fall in the interval [1,2%] during the remainder of President Obama’s term. That¶ supposition, along with my assumption that fatalities in Afghanistan will not escalate¶ dramatically, yields a projected Obama two-party vote share centered at 47.5%, as¶ indicated by boldface entries in table 3.19 Figure 3, which combines the Bread and Peace¶ factors to one dimension, illustrates the same prediction in perspective of actual and fitted¶ values of incumbent vote shares at all postwar presidential elections 1952-2008.

**Romney will win- Economy**

**Tien-Beck 9-1**

Charles is Professor of Political Science at the University of Iowa, “Nowcasts for and against Obama: Models Collide,” <http://themonkeycage.org/wp-content/uploads/2012/09/nowcastingseptember.pdf>

**We conclude**, then, **on the basis of the Jobs Model,** that President **Obama will go** ¶ **down to defeat**. **This defeat will be the product of a relatively weak approval level,** ¶brought down in part by racial intolerance, as we have argued elsewhere (Tien, Nadeau, ¶ and Lewis-Beck, 2012). But, still more importantly, it **will be product of a weak** ¶ **economy, for which as incumbent he is shouldering the blame**. In particular, **the** ¶ **economy overall has experienced anemic growth, with jobs creation itself at a post-World** ¶ **War II low. These are difficult numbers for any President to overcome**.

#### SMRs ready for deployment- DoD key

Freed 10

(Josh, Director of the Third Way Clean Energy Program, Elizabeth Horwitz is a Policy Advisor at Third Way’s Clean Energy ¶ Program, Jeremy Ershow was formerly a Policy ¶ Advisor at Third Way, “Thinking Small On Nuclear Power” <http://content.thirdway.org/publications/340/Third_Way_Idea_Brief_-_Thinking_Small_On_Nuclear_Power.pdf>, SEH)

Support commercialization of SMRs near ready for deployment.¶ Several U.S. companies are in the advanced stages of developing small ¶ reactors that adapt existing technology to produce smaller amounts of baseload ¶ electricity.¶ 15¶ These technologies are nearly ready for deployment. Final decisions ¶ about design, siting, and regulatory approval could be made within the next five ¶ years.¶ 16¶ The federal government can take several steps to help make this possible. ¶ First, economic barriers to entry must be lowered. For first movers, costs of ¶ licensing, design and regulatory approval will be comparable to those of the ¶ larger reactors because existing regulations have not yet been tailored to suit ¶ new designs. As the Nuclear Regulatory Commission (NRC) gains expertise in ¶ evaluating SMRs, and as economies of scale develop, these costs will decrease. ¶ Until this happens, the Department of Energy’s new cost-sharing program for ¶ near-term licensing and deployment of light water SMRs will help reduce some ¶ of the financial impact.¶ 17[i]¶ The NRC also needs to continue its commitment to ¶ allocate sufficient resources and build the expertise necessary to evaluate and ¶ license SMRs in a timely fashion.¶ The Department of Energy (DOE) and Department of Defense (DOD) can ¶ also prime the market pump by serving as a buyer of first-of-a-kind technologies. ¶ This could include deploying SMRs on DOE-owned sites, many of which ¶ are already zoned to support nuclear power plants,¶ 18¶ and appropriate DOD ¶ facilities in the United States. DOD, the largest single energy consumer in the ¶ U.S., comprises 78% of federal energy use, and is the most significant energy ¶ consumer in several metropolitan areas.¶ 19¶ DOE should also work closely with ¶ the private sector to develop standardized designs, with the goal of achieving ¶ demonstration and licensing within a decade.¶ 20