Nuclear Information and Resource Service - Public Citizen
Chesapeake Safe Energy Coalition - Maryland PIRG
Friends of the Earth - South Carolina Chapter, Sierra Club
Southern Alliance for Clean Energy - Center for a Sustainable Coast (GA)
Georgia Women's Action for New Directions (GA WAND)
Nuclear Watch South (GA)
Sustainable Energy & Economic Development (SEED) Coalition (TX) - Energía Mía (TX)
South Texas Association for Responsible Energy - Environment Texas
TexPIRG - True Cost of Nukes - Public Citizen's Texas Office
Sierra Club, Lone Star Chapter (Texas)

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Taxpayer-Backed Loan Guarantees for New Reactors to Companies in MD, SC, GA and TX are a Risky Venture Lacking Accountability, Must be Halted

The U.S. Department of Energy (DOE) is expected to soon issue its first set of controversial taxpayer-backed conditional loan guarantees for new nuclear reactors, under Title XVII of the Energy Policy Act of 2005. The Loan Guarantee Program faces fundamental problems that fatally undermine the program's integrity as it seeks to bail out the nuclear industry, including a lack of control over the prohibitive and uncontrolled cost of new reactors, excessive and unjustified secrecy, an inability to properly secure the loan guarantees, and the risk of backing flawed reactor designs.

DOE has apparently identified four companies for the conditional loan guarantees, which would not become final until reactor license approval is issued by the Nuclear Regulatory Commission, which is several years away at best. Seven planned reactors from these four companies are under consideration: Unistar Nuclear in Maryland (one reactor at the Calvert Cliffs site), SCANA in South Carolina (two reactors at the V.C. Summer site), Southern Company in Georgia (two reactors at the Vogtle site) and NRG Energy in Texas (two reactors at the South Texas Project). Given that DOE has the authority to hand out only $18.5 billion in loan guarantees and that the current estimated price tag for a single reactor is $9-15 billion, it is clear that DOE will not be able to fully back all of the new nuclear reactors currently under consideration.

DOE asserts that it will not repeat the "Synfuels" loan guarantee scandal of the 1980s, in which taxpayers were forced to pick up the tab after synthetic fuels producers backed by DOE loan guarantees were unable to compete with falling oil prices and therefore defaulted on billions of dollars of loans. This time, DOE claims to have hired "experts" who can forecast new nuclear reactor costs in comparison with other energy costs,[i] but it has shrouded their work in secrecy, refusing to post basic information on its website and dragging its feet in responding to Freedom of Information Act requests.

Moreover, DOE is already proposing to modify regulations so as to eliminate the taxpayer as the primary claimant to fixed assets after a default, in order to make the loan guarantees more attractive to investors - such as the French and Japanese import-export banks. Thus, what seems to be cooking in DOE's secret loan guarantee laboratory is a "Son of Synfuels" give-away, where securing loans for private nuclear companies takes precedence over protecting taxpayers.

Public interest opponents of the use of the taxpayer-backed loan guarantees to subsidize new nuclear reactors therefore demand that DOE suspend the issuance of conditional loan guarantees

as DOE has not demonstrated that it has in place a transparent process for protecting U.S. taxpayer-financed nuclear loan guarantees against default. Additionally, consideration of a loan guarantee to utilities pursuing the Westinghouse AP1000 reactor design, revealed by the Nuclear Regulatory Commission to have a containment structure that cannot withstand realistic stresses, raises questions about the Loan Guarantee Program's backing of utilities' pursuit of any of the new reactor designs, especially when lacking final design approval by the NRC.

Loan Guarantees Are Gambling with Taxpayer Money

Prohibitive and Uncertain Cost: The nuclear industry is notorious for its inability to predict and control costs. Estimated costs for constructing new nuclear reactors have increased fourfold since 2001. This year alone, cost estimates have ranged from 8.4 cents per kilowatt hour to a high of 30 cents.[ii] In fact, *Moody's* reported that "the ultimate cost associated with building new nuclear generation do not exist and current cost estimates represent best estimates, which are subject to change."[iii] According to the DOE's own analysis, the actual cost of 75 of the existing nuclear power plants in the U.S. exceeded the initial costs of those units by 207 percent.[iv] Recent experience in Finland – site of AREVA's flagship European Power Reactor (EPR) – suggests that history is already beginning to repeat itself. The project is currently at least 3 years behind schedule with nearly a $3 billion increase from its original $4.5 billion cost estimate.[v] It remains totally unclear how new nuclear reactor costs are being determined by DOE for the purposes of the loan guarantee program and whether the escalating cost trend is accounted for within the apparently secret economic analysis.

Downgraded Ratings: Credit rating agencies such as *Moody's* have recently cautioned against the likely negative effect of nuclear development on utilities' financial health. *Moody's* recently concluded that loan guarantees will only have a moderate effect on risk reduction.[vi] *Fitch's* has taken the warning a step further by downgrading SCANA and its subsidiary South Carolina Electric & Gas Co. (SCE&G). According to *Fitch's*, "the downgrades are driven by the financial pressure and increased business risk from SCE&G's plans to construct and finance two nuclear generating units for service in 2016 and 2019, respectively, and a decline in credit quality measures over the past18 months." [vii] The financial solvency implied by a utility's credit rating must be a key criterion in determining loan guarantee worthiness. It thus appears that the loan guarantees encourage utilities that are currently stable to take enormous risks and rely on U.S. taxpayer bailouts when they fail.

Risky Business: These loan guarantees would put U.S. taxpayers – rather than investors – on the hook to pay back the loans should any of the projects default. According to a May 2003 Congressional Budget Office (CBO) report, the risk of default on loan guarantees for new nuclear plants is "very high – well above 50 percent."[viii] The shift of liability to taxpayers underscores not only the necessity of public review and scrutiny of the loan guarantee program, but also begs the question of how effectively and to what degree DOE can mitigate financial risk to taxpayers through program administration. To date, the DOE has not proven its ability to properly administer a program whose deficiencies could mean tremendous loss to U.S. taxpayers. Underscoring the risks involved, NRG Energy has a *Moody's* credit rating just short of the junk bond category, which calls into question if loans for the South Texas nuclear project would ever be repaid.

Program Fosters Flawed Reactor Technologies? Financial backing of nuclear reactors that may be flawed or have not yet obtained final approval from the Nuclear Regulatory Commission is an extremely risky approach. A loan guarantee to a utility proposing an unlicensed reactor design not only second guesses the NRC's regulatory review process but also could end up with

a poor bet on a faulty design which cannot be licensed. The tenuous gamble of backing reactors which are yet unlicensed can be seen by the troubling situation with the Westinghouse AP1000 reactor, which has been revealed by the NRC to face serious design flaws in the "shield building" which houses the reactor. The NRC has informed Westinghouse in an October 15, 2009 letter[ix] that the design which had been presented has not been demonstrated to withstand "design basis loads," meaning that it is unclear if it can survive tornadoes, hurricanes, earthquakes, the impact of a commercial airliner or even the weight of the massive cooling water tank perched at the top of the building. DOE's backing of utilities pursuing unlicensed designs may well be a doomed strategy and necessitates that DOE not offer any loan guarantees to projects pursuing unlicensed and possibly flawed reactor designs.

Inadequate Program Management and Oversight: DOE has been criticized by the Government Accountability Office (GAO) and the DOE Inspector General for not setting up the necessary controls to manage the government's significant financial risk exposure. The GAO reported in July 2008 that "rather than taking and completing key steps to better ensure that the loan guarantee program would be well managed and accomplish its objectives, DOE focused on soliciting preapplications for proposed projects."[x] The report concluded that DOE is not "well positioned to manage the loan guarantee program effectively and maintain accountability because it has not completed a number of management and internal control activities key to carrying out the program." [xi]

Imprudent loan guarantee administration is not a new experience for DOE. Failure to properly assess financial risk in a similar loan guarantee program in the late-1970s and early-1980s, forced DOE to cover significant losses on the risky synthetic fuels industry. Loan defaults on these projects led to a $15 billion loss for U.S. taxpayers.[xii] The DOE has not demonstrated a lessons learned approach to the current loan guarantee program. The GAO has cautioned the DOE that past problems with loan guarantee programs have occurred, in part, because agencies did not exercise due diligence during the loan origination and monitoring processes. In addition, agencies have had difficulty estimating program costs because of faulty assumptions that caused cost estimates to be too low, limited historical data, and deficient policies and procedures for assessing risk and estimating costs.[xiii]

Loan Guarantee Program Lacks Transparency

Although DOE Secretary Chu has directed his staff to be responsive to requests for information by working "proactively and promptly regarding processing FOIA requests" and to "take affirmative steps to readily and systematically post information online in advance of a FOIA request,"[xiv] the DOE has consistently withheld information about the fundamentals of the loan guarantee program despite repeated attempts to secure information and records detailing the selection criteria and evaluation of the loan guarantee recipients. The DOE has yet to produce the relevant documentation, some of which has been requested using the Freedom of Information Act (FOIA).[xv]

Moreover, DOE has refused to disclose the benchmarks and guidelines it has been using to determine utility movement through the new and untested licensing process for new nuclear reactors. Nor has DOE indicated whether it is considering reactor design certification and state and federal licensing processes as factors in the economic analysis used to determine the projects financial viability and competitiveness.

DOE has also announced that it is in the process of "streamlining" the application review process, but refuses to make those proposed changes public. The emphasis on expediting

applications rather than implementing necessary administrative changes has been a major focus of criticism of the DOE by independent agencies such as the GAO. An open and transparent process must be developed to ensure cost accountability. Additionally, the issuance of any conditional guarantees must be halted until such an open process is in place.

Other Factors to Consider

Can't handle what they've got: In June, the Nuclear Regulatory Commission (NRC) sent letters to 26 nuclear plant owners in the U.S. regarding shortfalls in their funding for decommissioning of existing reactors.[xvi] The inability to dismantle a retired reactor and clean up the site due to financial mismanagement should summarily disqualify a utility from receiving a loan guarantee to construct a new reactor.

Conditional loan guarantees are premature: NRC license application status is a key consideration in the loan guarantee process. Presumably, even if a conditional loan guarantee has been made, no final loan guarantees would be issued until the applicants have received a construction and operating license from the Nuclear Regulatory Commission (NRC). No licenses will be issued by the NRC before 2012, at the earliest. Legal interventions at the state and federal levels challenging the merits and adequacy of the licensing applications by utilities on the reported "short list" further complicate the regulatory certainty necessary for loan approval.

Biting the hand that feeds: Several applicants lined up for loan guarantees from the federal government are also in a parallel line to sue the government over nuclear waste storage. Companies that receive federal loan guarantees should agree not to sue the U.S. government. Of the four companies on the short list for loans, all have attempted, or are attempting, to recover costs related to managing high-level waste (spent nuclear fuel). SCANA and NRG's cases were dismissed. Southern Company was awarded some compensation through its subsidiaries Alabama Power Company and Georgia Power Company. The case of Constellation Energy, which is involved in the Calvert Cliffs project, is still pending. [xvii]

Conclusions

- Escalating and indefinite costs for new reactors coupled with the uncertain and risky cost recovery renders this technology unqualified for a financing mechanism that legally puts U.S. taxpayers on the hook.

- The Department of Energy must fully reveal its methodology in making loan guarantee determinations, specifically with respect to its selection of the short-list applicants, and publicly release all documents and decision-making criteria related to the applications and its decisions before any conditional loan guarantees are approved.

- Given the lack of transparency, the risk involved and the poor track record of the DOE with loan guarantees, issuance of the current loan guarantees must be put on hold and no further loan guarantees should be authorized by Congress.

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[ii] *The Economics of Nuclear Reactors: Renaissance or Relapse*?, Mark Cooper, June 2009, http://www.nirs.org/neconomics/cooperreport_neconomics062009.pdf

[iii] *New Nuclear Generation in the United States*, Moody's Investor Services, October 2007
[iv] *Nuclear Power's Role in Generating Electricity,* Congressional Budget Office, May 2008, http://www.cbo.gov/ftpdocs/91xx/doc9133/05-02-Nuclear.pdf
[v] *Provisions on Finnish reactor wreck Areva profits,* Financial Times, September 1, 2009, http://www.ft.com/cms/s/0/e5f709bc-9690-11de-84d1-00144feabdc0.html?nclick_check=1
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[vii] "Rating agencies raise nuclear issues" – Charlotte Business Journal (6/26/09), http://charlotte.bizjournals.com/charlotte/blog/power_city/2009/06/rating_agencies_raise_nuclear_issues.html
[viii] "*S. 14 Energy Policy Act of2003: Cost estimate,"* Congressional Budget Office, May 2003
[ix] NRC letter to Westinghouse Electric Company, on AP1000 design flaws, in ADAMS – ML092320205, October 15, 2009; NRC news release *NRC Informs Westinghouse of Safety Issues with AP1000 Shield Building*, October 15, 2009, http://www.nrc.gov/reading-rm/doc-collections/news/2009/09-173.html
[x] *New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Program Management,* Government Accountability Office, July 2008, http://www.gao.gov/new.items/d08750.pdf
[xi] Id.
[xii] *Shattered Hopes for Synfuels*, Time Magazine (4/18/05), http://www.time.com/time/magazine/article/0,9171,1050485,00.html
[xiii] *New Loan Guarantee Program Should Complete Activities Necessary for Effective and Accountable Program Management,* Government Accountability Office, July 2008
[xiv] "Memorandum for Heads of Departmental Elements, Regarding Freedom of Information Act," Steven Chu, Secretary of Energy, June 5, 2009, http://www.fas.org/sgp/othergov/doe/foia060509.pdf
[xv] The DOE has yet to provide the vast majority of loan guarantee program-related documents requested by Texans for a Sound Energy Policy in November 2008 (FOIA-2008-000694), January 2009 (FOIA-2009-000019), and July 2009 (FOIA-2009-000619).
[xvi] "NRC Requests Plans from 18 Nuclear Power Plants to Address Apparent Decommissioning Funding Assurance Shortfalls" Nuclear Regulatory Commission Office of Public Affairs Press Release, June 19, 2009, http://www.nrc.gov/reading-rm/doc-collections/news/2009/09-112.html
[xvii] Case documents retrieved from Public Access *t*o Court Electronic Records (PACER) website.