

March 7, 2007

The Honorable Samuel W. Bodman
Secretary
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Secretary:

Attached, please find a summary of the consensus views of five major U.S. banking institutions (Citigroup, Credit Suisse, Goldman Sachs, Lehman Brothers, and Morgan Stanley) on the Title XVII loan guarantee program authorized by the Energy Policy Act of 2005.

We believe loan guarantees are essential to support the financing in the credit markets of new nuclear power plants in the United States. We are providing our perspective in the hope that it will assist the Department of Energy in developing regulations to implement this essential program. We regard the attached summary as a set of minimum conditions necessary to secure financing from lenders and from investors in the fixed income markets.

We would appreciate the opportunity to meet with you or your senior staff, at your convenience, to discuss the issues raised in the summary, and we are anxious to work with the Department of Energy in structuring a workable financing instrument to support construction of new nuclear power plants in the United States.

Respectfully submitted,

Rukmini Roy, Managing Director
Export and Agency Finance Group
Citigroup Global Markets, Inc.

Joseph Sauvage
Managing Director
Lehman Brothers Inc.

Steven Greenwald, Managing Director
Jonathan Baliff, Managing Director
Alex Kroner, Director
Credit Suisse Securities (USA) LLC

Ray Spitzley
Managing Director
Global Power and Utilities Group
Morgan Stanley & Co Incorporated

H. John Gilbertson Jr.
Managing Director
Goldman, Sachs & Co.

March 2007

Loan Guarantees for Advanced Nuclear Energy Facilities
Bankers' Viewpoints on DOE Implementing Regulations
(Developed by Citigroup, Credit Suisse, Goldman Sachs, Lehman Brothers, Morgan Stanley)

Summarized below are the consensus views of a group of leading bankers regarding the "must-have" financial support needed from the U.S. Department of Energy ("DOE"), under the Energy Policy Act of 2005 (the "Act"), to enable the construction of new nuclear facilities in the United States.

Loan guarantees are a necessity.

We believe new nuclear construction projects will not have access to the credit markets in order to finance such projects during construction and initial operations without the support of a federal government loan guarantee. Lenders and investors in the fixed income markets will be acutely concerned about a series of major risks, including the possibility of delays in commercial operation of a completed plant or "another Shoreham". We believe these risks will make such lenders unwilling at present to extend long-term credit to such a project in a form that would be commercially viable.

We also believe that the standby support "insurance" is inadequate to address these risks and that a number of the conditions in DOE's initial guidelines for the loan guarantee program, if carried forward into the final regulations, would make that program unworkable for purposes of financing new nuclear power projects. To be commercially viable, the loan guarantee program would need at a minimum to have the following terms:

1. Limited term of the guarantee.

We believe that debt need not be guaranteed for the full 30 years permitted by the Act. Instead, the guarantee will need to cover the period of construction plus at least 5 years (and preferably up to 10 years to provide flexibility with respect to refinancing) following the completion of construction and the commencement of operation. Various structures could be used to achieve financing with a limited term guarantee.

2. Loan guarantee covers 80% of total project cost.

The guarantee would cover all of the senior secured debt of each project, up to a maximum of 80% of the total project cost, as stipulated by the Act. The project sponsor would be left to decide upon the form of the remaining capital to be invested.

We believe the "80% of 80%" loan guarantee concept which was included in an earlier draft of DOE regulations will not work because it will not be possible to fund the remaining "20% of 80%" in the un-guaranteed debt markets on commercially reasonable terms.

3. Guarantor.

The guarantor is the United States Department of Energy with the full faith and credit of the United States of America.

4. Guarantees are 100% unconditional.

The guarantees must be 100% unconditional and viewed as "AAA" credit quality by the major rating agencies and lenders. This would mean there is absolutely no reason until after the maturity date of the guarantee that they would not be fully enforceable.

5. Scope of the Guarantee.

Coverage of all principal, interest, obligations with respect to Letters of Credit, interest rate hedging obligations and other credit instruments which are senior secured obligations of the project, subject to the 80% of project cost limit noted above.

6. Non-recourse.

All debt will be non-recourse to the project sponsors.

7. Collateral.

First priority security interest over all project assets and contracts.

8. Events of default.

There would be customary events of default which would permit the lenders to declare the guaranteed loans to be in default and to accelerate their payment. The primary such event of default would be non-payment of any interest and principal due, including the remaining principal amount which is payable at final loan maturity.

9. DOE option to remedy default or extend the term of the guarantee.

DOE would have the option at its sole discretion to extend the guarantee term of a specific project beyond its original term (subject to an agreed maximum term), or to take other steps during the loan term to keep current the guaranteed loan in order to avoid immediate acceleration of the entire principal.

10. Syndication or resale of guaranteed loans.

All guaranteed obligations may be syndicated or otherwise sold in the secondary market, on either a pro-rata basis or in tranches at the discretion of the project sponsor or the beneficiaries of the Guarantee.

11. Subsidy cost and calculation.

There should be a transparent methodology to calculate the Subsidy Cost that will be paid by the project as a loan guarantee fee, and such Subsidy Cost should be reasonable and commercially viable (in line with those of other Federal loan guarantee programs).

Such methodology should stipulate (i) the conditions which might ultimately cause the guarantee to be called (e.g. construction cost overruns, revocation of permits, injunctions, etc.), (ii) the probability of such an event occurring, and (iii) the ultimate recovery which DOE might expect, e.g. "loss given default".

The costs of the Subsidy, as calculated, plus the fees paid for administrative costs, need to be included in and be finance-able as part of the total "project cost".



NUCLEAR ENERGY INSTITUTE

Richard J. Myers
Executive Director, Policy Development

January 24, 2007

The Honorable David K. Garman
Under Secretary
U.S. Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Mr. Garman:

On behalf of the U.S. nuclear energy industry, I am enclosing an assessment of the loan guarantee program authorized by Title XVII of the Energy Policy Act of 2005, and the steps taken to date by the Department of Energy to implement this program.

This assessment is the product of a task force assembled by the Nuclear Energy Institute to provide expert guidance and counsel to NEI on the complex financing issues associated with new nuclear power plant construction. The members of the New Plant Finance Task Force (listed on page 3 of the document attached) include senior corporate finance executives from all the companies pursuing new nuclear power plants.

As you will see from the assessment attached, the nuclear industry shares the Department's conviction that the loan guarantee program requires disciplined management, rigorous project evaluation, and reasonable limits on the government's exposure. As you will also see, however, we do not believe the Loan Guarantee Guidelines published by the Department in August 2006 represent a workable means of achieving the necessary discipline and limitations, at least for large capital projects like new nuclear power plants. We have, therefore, proposed an alternative approach that would meet two equally legitimate imperatives: (1) the federal government's need to manage the potential financial exposure associated with a loan guarantee program, and (2) project sponsors' needs for a workable financing instrument. As a starting point, we recommend the use of risk-based evaluation criteria to ensure that credit risks are rigorously analyzed, quantified, scored and appropriately priced or mitigated.

The Honorable David K. Garman

January 24, 2007

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We would appreciate the opportunity to work with the Department to develop this approach further and possibly identify other reasonable techniques to provide the discipline necessary for this program. In fact, the Energy Policy Act itself sets clear limits on this program. Section 1703(a) of the Energy Policy Act states that "The Secretary may make guarantees ... only for projects that ... employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued." This provision clearly contemplates that technologies would cease to be eligible once they are in general use in the commercial marketplace.

I trust that the Department will accept this assessment as a constructive, affirmative proposal that will advance our mutual goal of implementing an effective loan guarantee program. NEI and senior executives from the companies pursuing new nuclear plant development hope that this assessment can be the start of an open dialogue about how best to serve the national interest, by developing implementing regulations for the loan guarantee program that accommodate the needs of the Department and developers of projects using innovative technologies. One of our major concerns with the August 2006 Guidelines is that they appear to have been developed largely in isolation, without input from experienced private sector finance executives, including the banking industry and individuals (like those on NEI's New Plant Finance Task Force) responsible for financing electric generation projects.

Please do not hesitate to contact me (202.739.8021 or rjm@nei.org) to discuss next steps and how we might structure a transparent process to develop workable implementing regulations and a well-managed loan guarantee office for this essential program.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard J. Myers". The signature is written in a cursive, flowing style.

Richard J. Myers
Executive Director, Policy Development



NUCLEAR ENERGY INSTITUTE

AN ASSESSMENT OF INITIAL IMPLEMENTATION
OF THE LOAN GUARANTEE PROGRAM
AUTHORIZED BY TITLE XVII OF THE ENERGY POLICY ACT OF 2005

January 2007

AN ASSESSMENT OF INITIAL IMPLEMENTATION
OF THE LOAN GUARANTEE PROGRAM
AUTHORIZED BY TITLE XVII OF THE ENERGY POLICY ACT OF 2005

I. Executive Summary

It will be a formidable challenge to finance the advanced electric generating technologies needed to (1) meet growing U.S. demand for baseload electricity over the next 15 to 20 years, (2) increase energy independence, and (3) meet more stringent environmental standards.

The new nuclear plants now in the early stages of development are capital-intensive projects and will require a level of capital investment that will strain the financing capability of the U.S. electric sector, particularly since that investment in new generating capacity coincides with a period of heavy capital investment by the electric sector in transmission, distribution and environmental control technologies. All of these investments are necessary to ensure the continued safe and reliable operation of the United States electricity system.

Addressing this challenge successfully will require innovative approaches to financing, combining all the financing capabilities and tools available to the private sector, the federal government and state governments.

The loan guarantee program authorized by Title XVII of the Energy Policy Act of 2005 is one of those tools and is essential to support the financing of new nuclear plants.

Initial implementation of the loan guarantee program, as reflected in the guidelines published by the Department of Energy in August 2006 (the DOE Guidelines), would not support financing of new baseload nuclear power plants. If the approach reflected in the guidelines is carried forward into implementing regulations, the loan guarantee program will not contain the critical ingredients to support financing of new nuclear projects.

This assessment discusses why the DOE Guidelines are not workable and proposes an alternative approach that would meet two equally legitimate imperatives: (1) the federal government's need to manage the potential fiscal exposure associated with a loan guarantee program, and (2) project sponsors' needs for a workable financing instrument.

This assessment includes:

- ▶ a brief summary of the investment requirements facing the U.S. electric power industry over the next 15 years (Section II)
- ▶ a discussion of the strategic value of loan guarantees in enabling the electric power industry to finance a portion of the capital investment that will be required (Section III)
- ▶ a general assessment of the DOE Guidelines, why those guidelines are not workable, and a proposed alternative approach that would be workable (Section IV)
- ▶ a detailed discussion of the nuclear industry's concerns with the DOE Guidelines, and why the provisions of those guidelines should not be carried forward into implementing regulations (Section V).

This assessment was prepared by the Nuclear Energy Institute (NEI), with substantial input and assistance from NEI's New Plant Finance Task Force, which includes senior corporate finance executives at all the companies with plans for new nuclear projects.

**Nuclear Energy Institute
New Plant Finance Task Force**

Chairman

John Young
Executive Vice President, Finance and Markets
Exelon Corp.

James Swan
Controller
SCANA

Theo Bunting
Chief Financial Officer, Nuclear Operations
Entergy Nuclear Inc.

Mark Sweeney
Chief Financial Officer, Nuclear Energy
GE Energy

John Casey
Assistant Treasurer
TXU

Kathy Williams
Chief Financial Officer
AREVA

John Collins
Senior Vice President and Chief Risk Officer
Constellation Energy

Charles Wilson
Director of Business Unit Finance
Duke Energy

Paul Cutler
Treasurer
FPL Group

Mike Wilson
Treasury Director
Westinghouse

Kim Greene
Senior Vice President, Finance, and Treasurer
Southern Company

Mark Wimberly
Director of Business Services
Progress Energy

John Hoskins
Senior Vice President and Treasurer
Tennessee Valley Authority

Fred Wood
Senior Vice President, Financial Management
Dominion Generation

Brad Porlier
Vice President, Business Development
NRG Texas LLC

II. The Investment Challenge

Over the past 15 years the electric power sector has invested heavily in new gas-fired generation and in upgrading existing baseload generating assets but has not invested in new capital-intensive baseload generating technologies. The lack of investment in new, technologically advanced generation was the result of a confluence of events, including (1) relatively high generating capacity margins throughout the United States, (2) the development of lower capital cost, mid-merit, gas-fired generation during a period of relatively low cost supplies of natural gas and oil, (3) longer-term investment uncertainty associated with the continued development of competitive electricity markets and the market rules governing these regional electricity markets, and (4) difficulties in obtaining permits. As a result, investment in new coal and nuclear generating capacity all but disappeared, even though these two fuel sources represent 70% of U.S. electricity supply and provide the greatest price stability.

Between 1992 (when the Energy Policy Act mandated competition at the wholesale level and open access to the transmission system) and 2005, the United States commissioned a mere 8,000 megawatts of new coal-fired capacity and 2,500 megawatts of nuclear capacity. During that same period, however, generating companies built approximately 290,000 megawatts of new gas-fired capacity. Gas-fired capacity was preferred because it represented the lowest possible investment risk since it could be built quickly and had low capital cost.

It is now clear, however, that the construction of massive amounts of gas-fired capacity has placed unsustainable demand on natural gas supply, which will increase U.S. reliance on foreign sources of natural gas (through increasing imports of LNG). This has resulted in high prices for natural gas, and these higher costs are reflected in higher costs of electricity to consumers. It is equally clear that U.S. electricity markets need new baseload generating capacity, and that the U.S. electric industry is on the threshold of a major construction cycle for new baseload generating capacity and new electric transmission. Consensus estimates suggest that the industry, over the next 15 years, must invest between \$750 billion and \$1 trillion in new generating capacity, new transmission and distribution infrastructure and environmental controls. This new capital spending represents a major challenge to the electric power industry.

The challenge associated with financing new high-capital-cost baseload technologies is particularly acute in restructured electricity markets, which represent one-half of all the states. These markets have not yet developed mechanisms to ensure generating resource adequacy to meet growing demand, although they are seeking to do so. Cambridge Energy Research Associates expressed concern over this issue in a recent report (*U.S. Power Sector: In the Swing*, July 2006): “[S]ome markets still lack the financial incentives necessary for new plants to be built Most competitive regions have a ‘missing money’ problem: energy market margins typically pay for only a fraction of fixed costs for new power plants Although many regions will need new power plants ... building new power plants to sell into competitive markets does not appear to be an attractive strategy.”

III. The Strategic Value of Loan Guarantees

The Energy Policy Act of 2005 recognized this financing challenge and provided limited investment stimulus for construction of new baseload power plants. That stimulus includes production tax credits for new nuclear plants, investment tax credits for advanced coal-based projects, and authorization for loan guarantee program within the Department of Energy to support financing and commercial deployment of innovative technologies that reduce emissions.

In terms of facilitating construction financing and access to capital, one of the most valuable forms of investment stimulus in the Energy Policy Act is the authority to provide loan guarantees, conferred on the Secretary of Energy by Title XVII. The Secretary is authorized to guarantee up to 80% of project cost for projects that (i) avoid, reduce or sequester air pollutants or greenhouse gases, and (ii) employ new or significantly improved technologies.

A properly structured loan guarantee program, along with other structuring elements discussed in more detail in Section IV below, allow companies to employ project financing on a non-recourse basis. The ability to use non-recourse project finance structures offsets the most significant financing challenge facing new baseload power plant construction – the cost of baseload projects relative to the size, market value and financing capability of companies that will build them. New nuclear projects are \$3-4 billion undertakings. Although \$3-4 billion projects are not unique in the energy business, such projects are typically built by major oil companies with market values 10-15 times higher than the largest electric companies. All the companies that have announced plans for new nuclear power plants have a combined market value only slightly more than one-half the market value of ExxonMobil. Project financing, supported by loan guarantees, also allows a more efficient, leveraged capital structure to reduce project cost by lowering the weighted average cost of capital, and thus provides a substantial consumer benefit in the form of lower electricity prices. Loan guarantees also mitigate the impact on the balance sheet of these large capital projects which would otherwise place stress on credit quality and bond ratings.

Loan guarantees are critically important to new baseload plant financing.

Unregulated companies will be hard-pressed to build nuclear power plants and other large capital-intensive baseload projects except on a project finance basis with the debt financing secured by the federal government. Unregulated companies simply do not have the capacity to finance these projects on balance sheet without access to project finance structures. Some regulated companies, especially those pursuing multiple generating and transmission projects at the same time, may also be limited in their ability to finance projects without project finance capability because of substantial pressure on credit quality and debt ratings. Absent an effective loan guarantee program, excellent projects that should be built will not be pursued.

The loan guarantee program is not a subsidy. Under the terms of the statute, project developers expect to pay the credit subsidy cost of the loan guarantee. Given a rational approach to implementation, in which projects are selected based on a high likelihood of commercial success with the loan guarantees, there will be minimal risk of default and therefore minimal risk to the taxpayer. The Title XVII loan guarantee program is a financing tool, which should be modeled on the successful financing techniques already employed by the federal government (through such agencies as the Export-Import Bank and the Overseas Private Investment Corp.). By allowing projects to overcome the market barriers described above, the loan guarantee program is designed to

stimulate investment in high-capital-cost projects that are in the nation's best interest because they improve U.S. energy security, meet growing electricity demand, reduce emissions, accelerate the commercialization of improved technologies, and ensure the reliable operation of the electricity system.

IV. General Assessment of the Department of Energy's Initial Implementation of the Loan Guarantee Program and Proposed Alternative Approach

On August 8, 2006, the Department of Energy published initial guidelines (DOE Guidelines) under which it will implement the loan guarantee program, accompanied by an initial solicitation for projects. This initial round of loan guarantees is subject to a \$2-billion cap. Nuclear projects are not included in the initial solicitation. The Department has indicated that nuclear projects will be covered by formal regulations to be developed over the next year.

In terms of supporting financing of new nuclear and advanced coal-based baseload power plants, the DOE Guidelines significantly erode the value of the loan guarantee program authorized by Title XVII. The procedures outlined in the guidelines are so restrictive that they would not support construction and financing of new baseload power plants. If the regulations now being developed mirror the guidelines published in August 2006, the loan guarantee program would not support new coal-based or advanced nuclear power plants, and will thus fail to fulfill part of the statutory intent – to spur construction of new, cleaner baseload capacity.

We believe the focus of the DOE Guidelines on regulating the procedural and structural aspects of the energy loan guarantee program is misdirected and (as discussed in detail in Section V below) may actually result in project structures that are less creditworthy. Instead of relying on sound underwriting, credit analysis and structuring to ensure that projects meet the statutory requirement of “reasonable prospect of repayment,” the guidelines take a command-and-control regulatory approach to mandate limits on the financing structure. The cumulative impact of these administrative restrictions will be to exclude those lenders and project sponsors with the greatest experience from participating in the program. Simply put, lenders will allocate their time and capital elsewhere and project sponsors will utilize other technologies or will be unable to obtain the capital needed to meet our nation’s growing capacity requirements.

Unable to use an overly restrictive loan guarantee program, the soundest projects may not go forward. The added costs and burdens imposed by the regulations will increase the cost of projects that do use the loan guarantee program as proposed, thereby increasing the risk of the project and the electricity prices paid by consumers. Rather than relying on widely used, credible project finance underwriting criteria to determine creditworthiness, the guidelines attempt to mandate specific terms and conditions that are not based on specific project information, and thereby undermine the prospects for a successful program.

A New Approach: Risk-Based Evaluation Criteria

We believe the Department should focus the loan guarantee program design on credit analysis and underwriting of the kind any bank would employ to lend money. We believe the pending rulemaking should establish a set of risk-based evaluation criteria to ensure that credit risks are rigorously analyzed, quantified, scored and appropriately priced or mitigated. The Department then should have the flexibility, as provided in the statute, to structure loan guarantees that will enhance the statutory objective of commercializing innovative technologies, with projects that are financially sound and have the financial capacity to repay the underlying loan obligation guaranteed by the U.S. government.

Set forth below is an illustrative set of criteria, based on standard project finance credit analysis. This illustrative set of evaluation criteria are preliminary and need to be tailored to the specific project being developed, taking into account particular sectors or technologies. The evaluation criteria have been successfully utilized by project sponsors, lenders and project participants in the financing and construction of power projects over the last 25 years. We encourage the Department to develop risk-based evaluation criteria through a joint government-private sector process involving interested stakeholders. This could be achieved through a SEAB (Secretary of Energy Advisory Board) task force or through organized workshops. Implementation of the evaluation criteria through an effective underwriting and Credit Review Board process could be assured by utilizing outside experts, or otherwise outsourcing the project and credit review function (including possibly to the Export-Import Bank or other government entities with expertise in reviewing and underwriting project financings). This process would be supplemented by third party consultants and reports that are standard for project financings, such as independent engineers, fuel consultants, insurance advisors and market studies.

With such evaluation criteria in place, the Department would then have the flexibility as provided in the Energy Policy Act of 2005 to establish the terms and conditions of the loan guarantees for projects consistent with statutory limits. Under this approach, the Secretary should have the discretion, where appropriate, to:

- ▶ provide 100% guarantees for up to 80% of the project cost;
- ▶ permit *pari passu* structures where other senior project debt is being utilized; and
- ▶ permit separate syndication or use of conduit vehicles with respect to the fully guaranteed portion of debt instruments.

This approach, combining a rigorous credit analysis based on established evaluation criteria with a financeable federal loan guarantee, would:

- ▶ maximize the commercialization of innovative technologies through financially sound projects;
- ▶ minimize taxpayer risk through rigorous risk assessment and mitigation measures; and
- ▶ achieve the lowest feasible cost of financing, which lowers the government's financial exposure, lowers the risk profile of the portfolio of projects guaranteed by the government, lowers the cost to consumers of electricity produced by these projects, and promotes innovative technologies.

Illustrative Evaluation Criteria

A. Management and Financial Strength

1. Sponsor/Developer Strength and Support

- ▶ quality and commitment to project
- ▶ experience and track record in sector
- ▶ credit ratings
- ▶ equity commitment
- ▶ other equity support

2. Management Strength

- ▶ expertise and experience of key project management personnel (both construction management and operating management)

3. Lender Strength and Commitment

- ▶ lead/managing agents/underwriters
- ▶ lender qualifications (expertise, experience and financial strength)
- ▶ level of lender risk sharing
- ▶ level of project oversight and diligence
- ▶ asset management capabilities

4. Financial Strength of Project

- ▶ financial structure
- ▶ debt to equity ratio
- ▶ debt service coverage ratio (interest and cash flow)
- ▶ sensitivity analysis on all key assumptions
- ▶ recovery analysis in a default scenario
- ▶ debt service and other reserves
- ▶ security/collateral arrangements
- ▶ insurance package
- ▶ credit enhancements

B. Pre-Completion/Construction Risk

1. Cost and Schedule Risks

- ▶ extent of project-specific engineering and design work completed
- ▶ degree of standardization with other projects
- ▶ status of site plans, evaluations and permits
- ▶ extent of independent engineer review of design, cost and schedule
- ▶ appropriateness of cost contingency amounts
- ▶ qualification, experience and financial strength of contractors and major subcontractors
- ▶ clarity on interaction and coordination among contracts and parties required to implement the project
- ▶ change order process

2. Labor and Material Risks

- ▶ contractor staffing requirements and labor relations and supply
- ▶ availability of critical materials and supplies
- ▶ long-lead procurement items

3. Contractual Structure and Completion Support

- ▶ existence of contract for engineering, procurement and construction with acceptable scope and budget
- ▶ existence of contract that controls risks related to price

- ▶ existence of adequate security for payment, such as letters of credit, bonds or other form of guarantee
 - ▶ testing and commissioning requirements
 - ▶ performance guarantees
 - ▶ liquidated damages and penalties (performance and delay)
4. Force Majeure Risks
 5. Construction Period Insurance
 6. Connecting and Other Infrastructure
 - ▶ fuel transportation
 - ▶ interconnection (transmission lines, upgrades)
- C. Operation Risk**
1. Operator Strength
 - ▶ qualification, ability and financial strength of operator
 - ▶ operator compensation structure
 - ▶ operations and maintenance agreement
 2. Operating Cost Risks
 - ▶ makeup, timing and potential volatility of operating costs
 - ▶ operating budget control mechanisms
 - ▶ degree of standardization with other projects
 3. Input/Supply Issues
 - ▶ supply and transportation of key inputs (e.g., feedstock, fuel)
 - ▶ availability
 - ▶ pricing and cost volatility (hedging arrangements)
 - ▶ liquid markets or long-term supply contracts (consistency with offtake pricing)
 - ▶ credit quality of suppliers
 4. Performance
 - ▶ capacity and availability standards
 - ▶ routine and major maintenance
 - ▶ spare part requirements
 - ▶ future capital investments
 - ▶ warranties
 5. Output Transportation/Transmission Arrangements
 6. Waste Disposal
 7. Force Majeure Risks
 8. Operations Period Insurance

D. Technology Risk

1. Technical Design
2. Manufacturer – counterparty risk
3. Technical Readiness
 - ▶ scale of previous operation
 - ▶ use of proven technology, components and designs
 - ▶ extent of previous operating data and record of performance
 - ▶ prior independent technical design certifications
 - ▶ extent of design proof through full-scale or partial-scale testing
4. Feasibility Study
5. Mitigants
 - ▶ warranties
 - ▶ performance guarantees

E. Off-take Risk

1. Long-term off-take agreements or liquid markets
2. Off-take Agreements
 - ▶ credit strength and performance risk of off-take counterparty
 - ▶ length of term of off-take contract
 - ▶ pricing mechanism (consistency with input and capital costs)
 - ▶ quality, quantity or efficiency/availability impact on obligation to purchase and cash flows
 - ▶ take or pay obligations
3. Market/Commodity Risk
 - ▶ market pricing and degree of volatility
 - ▶ liquidity of product markets
 - ▶ demand projections, including size of market relative to project output
 - ▶ project production cost and other project competitive advantages relative to market and competitors
 - ▶ potential for new contracts, new products, product substitution or other factors that could affect demand or supply in the market
4. Physical/Financial Hedging-security arrangements

F. Legal, Regulatory and Permitting Issues

1. Legal
 - ▶ organizational structure/ownership
 - ▶ use of bankruptcy remote special purpose vehicle
 - ▶ project, loan and security contractual structure and enforceability

2. Regulatory/Permits - Federal/State

- ▶ regulatory environment for project inputs and output and project operations
- ▶ environmental and other site permits
- ▶ construction
- ▶ operating
- ▶ fuel/fuel transportation
- ▶ waste/combustion by-product disposal (e.g., nuclear fuel, coal ash)
- ▶ risk of change in law or regulations and impact on project

3. Accounting and Tax Issues

V. Detailed Discussion of DOE's August 2006 Loan Guarantee Guidelines

The industry's major sources of concern with the August 2006 Loan Guarantee Guidelines (DOE Guidelines) are discussed below.

1. **EPAct Title XVII authorizes loan guarantees up to 80% of total project cost. The DOE Guidelines limit coverage to 80% of the loan amount (80% of 80%), with flexibility to guarantee above 80%, but never 100%.**

Industry Position

There is no basis in law or administrative practice for restricting the guarantee to 80% of project debt. If incorporated into the implementing regulations, this restriction would reduce the value of the loan guarantees by approximately one-half, increase the project's capital costs and thereby compromise project economics.

The policy limiting coverage under federal loan guarantees to 80% of the loan amount is an administrative guideline, not a statutory requirement. This policy long predates the Federal Credit Reform Act of 1990 and allows for a wide degree of flexibility in its application.

The Federal Credit Reform Act of 1990 does not address the issue of percentage loan coverage for federal loan guarantees. The Act addresses credit budget management practices. There is no mention in the statute of risk-sharing or any other concept that could be interpreted as support for a policy of less than 100% debt coverage.

The OMB policy on 80% debt coverage is an administrative policy that can be traced back to OMB Circular No. A-70, *Federal Credit Policy*, issued in 1984, and perhaps even earlier. Current OMB policy is contained in Circular No. A-129 (Revised), *Policies for Federal Credit Programs and Non-Tax Receivables*, issued in November 2000 (the successor to OMB Circular No. A-70). OMB Circular A-129 (Part II, Section 3a) states that "[p]rivate lenders who extend credit that is guaranteed by the Government *should* bear at least 20% of the loss from a default" (emphasis added). Thus, the policy is not mandatory but suggestive in nature. Circular A-129 also provides flexibility in the application of the guideline on 80% loan coverage. It states: "The policies and standards of this Circular do not apply when they are statutorily prohibited or are *inconsistent with statutory requirements*" (emphasis added). The guideline for 80% coverage of debt is inconsistent with the requirement in EPAct Section 1702 (c), which authorizes that "a guarantee by the Secretary shall not exceed an amount equal to 80% of the project cost." The application of Circular No. A-129 would prevent the Secretary from ever reaching the statutory cap. Administrative practice in other federal loan guarantee programs also allows for flexibility in setting loan guarantee limits up to statutory caps.

In FY 2006, the volume of federal loan guarantees with 100% loan coverage is estimated at \$234 billion. The FY 2007 President's budget proposes a total volume level of \$242 billion for all federal loan guarantees with 100% debt coverage. In the FY 2007 budget, 65% of the budgeted total value of all federal loan guarantees (including secondary guarantees) provide for 100% loan coverage.

2. **Any commercial debt brought into a project must be subordinate to the government-guaranteed debt. *Pari passu* financing structures would be prohibited under the DOE Guidelines.**

Industry Position

It is not uncommon in federal government loan guarantee programs to have a second tranche of non-guaranteed commercial debt in a project. Any such commercial debt is, however, typically *pari passu* with the guaranteed debt. The requirement in the DOE Guidelines that any commercial debt must be subordinate to the guaranteed debt will significantly restrict the interest of commercial lenders and the availability of financing for the program, especially in view of the size of the projects. By making this program less attractive to top-tier lenders and effectively requiring more expensive sub-debt financing structures, the financeability of a project is significantly compromised. Furthermore, the guidelines appear to prohibit the substitution of equity for the unguaranteed portion of debt. As a result, this restriction could actually erode a project's creditworthiness, rather than enhancing the credit structure.

DOE has misinterpreted the "superior rights" provision [Sec. 1702(g)(2)(B)] as prohibiting *pari passu* financing structures and prohibiting any holders of non-guaranteed debt from recovering on their debt until DOE's claim is paid in full. Section 1702(d)(2), which provides that the obligation guaranteed by DOE cannot be subordinate to other financing, clearly permits *pari passu* financing (where senior lenders share equally and ratably in right of payment and in the security in proportion to their debt). DOE's interpretation is not only contrary to this statutory structure, it is inconsistent with prior DOE regulations and case law interpreting identical language.¹

¹ Section 1702(g)(2)(B) is identical for all intents and purposes to the last sentence of 42 U.S.C. § 5919(g)(2) which was enacted in 1978 as part of the Loan Guarantees for Alternative Fuel Demonstration Facilities program. DOE's regulations implementing that provision provided as follows:

(f) The guarantee agreement shall provide that, upon payment of the guaranteed loan by the Secretary, the holder shall transfer and assign to the Secretary all rights held by the holder in the guaranteed loan. Such assignment shall include all related liens, security, and collateral rights. Upon such payment and assignment, the Secretary shall be subrogated to the rights of the recipient of the payment and shall have superior rights in and to the property acquired from the recipient of the payment. Where there is a partial guarantee of the loan, the guarantee will specify the terms and conditions for the handling of collateral and the disposition of the proceeds of recovery after liquidation of the security. (emphasis added) 10 C.F.R. § 796.60(f) (45 Fed. Reg. 15487 (1980) (removed 60 Fed. Reg. 49196 (1995))).

These regulations did not prohibit a *pari passu* structure. In fact with respect to payments on partial guarantees, the regulations provided for *pari passu* treatment ("When a lender holds a guaranteed and a nonguaranteed portion of a loan, payments of principal or interest made by the borrower, shall be applied by the lender to reduce the guaranteed and nonguaranteed portions of the loan on a proportionate basis." (emphasis added) 10 C.F.R. 796.11(a)(11) (45 Fed. Reg. 15478 (1980) (removed 60 Fed. Reg. 49196 (1995))). With respect to collateral, the 1980 regulations clearly contemplated sharing of collateral and an intercreditor arrangement to be negotiated in the guarantee that would be typical for a *pari passu* structure.

Moreover, in a case interpreting 42 U.S.C. § 5919(g), the Eighth Circuit held that the "superior rights" provision granted superior rights to the United States over the debtor's rights to the property upon default under state law (specifically, debtor's statutory rights of redemption) U.S. v. Great Plains Gasification Associates, 813 F.2d 193 (8th Cir. 1987). The case focused on the debtor's statutory and equitable rights to the property upon default that absent the "superior rights" provision would have been superior to the rights of the lender. The court found that while Congress had not explicitly dealt with the debtor's redemption rights, it did provide for the procedures to be followed upon default and had granted

The interpretation in the current guidelines is also contrary to standard lending practice. If DOE will not guarantee 100% of the debt, a standard project financing would result in a structure where the senior lenders (both guaranteed and unguaranteed) have a *pari passu* first lien on all project collateral. This first lien would be superior to the rights of other third parties and DOE could, in the case of a payment default, step into the rights of the guaranteed senior lenders through subrogation in proportion to their interests. DOE has interpreted the statute to prohibit this standard structure. In conjunction with its restriction limiting guarantees to 80% of the debt and its unwarranted interpretation that this means 80% of "any single debt instrument," the result is an anomalous situation where the lenders are guaranteed on 80% of the loan and deeply subordinated on the other 20%.

To the best of our knowledge, there is no market for the type of subordinated debt envisioned by DOE. Normally, two different types of financial institutions and two different debt instruments would be required for a structure involving sub-debt: one type of institution would invest in the senior, government-backed debt; a different investor (seeking higher rewards in exchange for taking greater risk) would hold the junior debt. Many of the first-tier commercial lenders and other financial institutions do not provide or are restricted in their ability to invest (e.g., insurance companies) in subordinated debt. Even where these disparate investments could be placed with a single large institution, the two tranches of debt would be held in separate legal entities (which also appears to be precluded by the guidelines). The only way to implement DOE's proposal would be through the use of complex trust arrangements with unnecessary transaction costs, and such mechanisms would serve no useful purpose other than to circumvent DOE's rule and limit liquidity in the market for holding this debt.

Furthermore, these restrictions would preclude the possibility of commercial lenders offering senior unguaranteed loans in financing structures that may actually require a smaller federal government guarantee (e.g., 20% equity, 20%-30% senior unguaranteed debt, and 50-60%

superior rights to the United States over the debtor with respect to the property in the foreclosure (i.e., the property acquired by subrogation pursuant to the guarantee). Thus, the "superior rights" provision addresses the federal government's rights in property it acquires after default and subrogation in relation to the debtor and other persons, but does not address the issue of the federal government's or guaranteed lender's share or interest in the collateral in the first instance. The case did not involve a partial guarantee - the project was financed by a loan from the Federal Financing Bank, which loan was guaranteed by DOE and secured by a mortgage on virtually all partnership assets.

But applying the case in the context of a partial guarantee, we can readily see that the "superior rights" provision does not preclude a *pari passu* structure. In a partial guarantee, upon default and payment, DOE would be subrogated to the rights of the guaranteed lender but only to the extent of the partial guarantee. In a *pari passu* structure the guaranteed lender would have a first lien in the security, equally and ratably with the other senior lenders. Upon default and payment on the partial guarantee, DOE's ratable interest in the security that it obtains through subrogation would be a first lien. DOE would have superior rights with respect to the property acquired through foreclosure. As a practical matter, the collateral would be held by a collateral trustee and the terms and conditions for handling of collateral and the disposition of the proceeds would need to be addressed in an intercreditor agreement (as contemplated by the 1980 regulations) - but to the extent the collateral is sold in foreclosure, DOE would have superior rights to its ratable share of the proceeds. The 1980 regulations and the case law, as well as the statutory structure of Title XVII, support the position that the "superior rights" provision relates to the rights of the Secretary after default and in connection with foreclosure once the Secretary has been subrogated to the rights of the guaranteed lender, and the statute does not preclude a *pari passu* structure.

guaranteed debt). Similarly, as noted above, the guidelines appear to preclude substitution of sponsor equity for this portion of the project capital structure (e.g., a 25-30% equity with a 70-75% federal government guaranteed debt structure would be precluded). Accordingly, the prescriptive approach limits the ability of sponsors and their financial advisors to propose creditworthy financing structures that may provide less government exposure.

Moreover, even if the “superior rights” provision is interpreted to preclude sharing of first lien priority status, it should not require the level of subordination set forth in the guidelines, which goes well beyond standard practice for second lien and mezzanine financing. These restrictions will force the 20% unguaranteed debt to be sub-debt that is quasi-equity. Such sub-debt would be very expensive, if available at all.

3. **If any loan guaranteed by DOE is syndicated, traded or otherwise sold on the secondary market, DOE will require that the guaranteed portion and non-guaranteed portion of the debt instrument are resold on a pro-rata basis. The guaranteed portion of the debt may not be “stripped” from the non-guaranteed portion—i.e., sold separately as an instrument fully guaranteed by the federal government.**

Industry Position

The requirement for pro-rata sales and the prohibition on “stripping,” which have no statutory basis, further limit the attractiveness of this program for potential lenders and constrain the availability of financing for eligible projects.

A number of the top-tier lenders that participate in federal loan guarantee programs use securitization or conduit vehicles as a mechanism to reduce costs and improve liquidity. Given the size of the projects, no single lender could finance the project; it is, therefore, critical to have access to multiple sources of liquidity. In effect, these lenders fund their loans by transferring the loans to a special-purpose vehicle that holds only 100% federally guaranteed instruments, then sell interests in those vehicles. They have found that these vehicles are an efficient mechanism to fund these loans, and are necessary because of the very thin spreads and limited profitability of these federally guaranteed loan programs. The DOE guidelines would make these securitization or conduit vehicles which are used in other federal programs unavailable for this program. If lenders cannot use their securitization vehicles, they may not participate in the program. This achieves the anomalous result that those lenders with the most federal loan guarantee experience would opt out.

As already discussed under Issue #2 above, the pro-rata secondary sale prohibition also ignores the commercial reality that the A loan (senior debt) and B loan (sub-debt) market are distinctly different and involve different investors. Combining the no *pari passu* restriction and the prohibition on stripping will make such loans very difficult to syndicate and thereby further restrict the availability of financing for this program.

4. **The DOE Guidelines require a standard of care from lenders that they will not contractually agree to.**

Industry Position

According to the DOE Guidelines, the Secretary must find that the lender and other appropriate parties will exercise “a high level of care and diligence,” which is very unconventional and will likely limit the number of lenders interested in participating. This arbitrary standard of care is not one which lenders will accept contractually and any attempt to impose such a requirement in the implementing regulations will further restrict the interest of commercial lenders and the availability of financing for this program. It is standard in loan documentation for the agent and other lenders to limit their liability except in the case of gross negligence and willful misconduct (and often only as finally determined by a court). It is not realistic to expect lenders to assume greater liability, especially in the case of a federal loan guarantee program where profit margins are expected to be very limited.

Ongoing obligations of due diligence and care will effectively result in the guarantee being conditional, which largely undermines the value of the loan guarantee. This also will impede the ability to syndicate the debt and thereby compromise the effective and orderly organization of capital to support the project.

5. **The DOE Guidelines should clarify that the guaranteed debt is non-recourse beyond the project.**

Industry Position

The statute makes clear (Section 1702(g)(4)(B)) that, in the event of default, the loan guarantee is non-recourse beyond the project: “If the borrower defaults on an obligation, the Secretary shall notify the Attorney General of the default On notification, the Attorney General shall take such action as is appropriate to recover the unpaid principal and interest due from -- (i) such assets of the defaulting borrower as are associated with the obligation; or (ii) any other security pledged to secure the obligation.”

This non-recourse provision is essential for successful project finance structures. If the guaranteed loan is recourse beyond the project—e.g., to the balance sheet of a project sponsor—the rating agencies will impute that debt to that project sponsor’s balance sheet, and require the company to increase the amount of equity in its capital structure in order to maintain its overall debt rating. This would offset much of the economic benefit of the guarantee.

The DOE Guidelines, however, are equivocal on the issue of recourse, at best. The Guidelines require the Secretary of Energy, before finalizing a loan guarantee agreement, to ensure that “the prospective borrower has pledged project assets and other collateral or surety, including non-project-related assets, as determined by the Secretary to be necessary as assurance for the repayment of the loan.” The implementing regulations should clarify that guaranteed loans will require security in only the project assets, contracts and agreements.

A project sponsor should, at its discretion, have the flexibility to pledge additional assets or other forms of security as collateral (e.g., to reduce the credit subsidy cost of the loan guarantee), and the implementing regulations should provide this flexibility.

6. **The DOE Guidelines require a project sponsor to obtain a credit assessment of the project in the absence of the loan guarantee from a nationally recognized debt-rating firm.**

Industry Position

Because the loan guarantee will be a critical factor affecting the project's economics—e.g., interest costs and leverage factors—and since the industry believes it would be impossible to obtain financing for an advanced nuclear project with 80% leverage absent the federal loan guarantee, obtaining a credit assessment for the project without the guarantee is not likely to be useful. Such an assessment would likely demonstrate why these innovative technologies require loan guarantees to obtain financing. It would be more appropriate to evaluate the creditworthiness of the project taking into account the loan guarantee. An independent analysis of the project by consulting engineer or other reputable firm would provide more relevant information for assessing project viability and risk. In fact, such an analysis would be required by the lenders in order to evaluate the project.

The rating agency requirement represents an unnecessary expenditure of time and funds. To the extent that DOE requires a third-party credit assessment of the project as part of its credit analysis, or in the determination of Subsidy Cost, project sponsors should not be limited to utilizing one of the rating agencies and should have the ability to obtain the credit assessment from other acceptable independent firms.

7. **The DOE Guidelines contain pre-application and application requirements that are not feasible—e.g., conditional commitment letters from lenders and commitments of equity at the pre-application stage; fully negotiated loan documents, legal opinions, closing checklists at the application stage.**

Industry Position

The requirements for a conditional commitment letter from lenders and a commitment of equity are unnecessary at the preliminary application stage, and impose a significant burden on project sponsors at an early stage in project development. For example, it is not unheard of for Ex-Im Bank to go to its Board for approval of a Preliminary Commitment or even a Final Commitment with the guaranteed lender still to be identified.

Lenders will not be willing to provide a commitment letter at early stages in the project without substantial conditions that would render the commitment meaningless. Rather, commitment letters generally are issued at the end of the project development, when the project is ready to be financed and after going to credit committee at the lending institution. More appropriately, for earlier stages, DOE should accept a Mandate Letter, which offers a higher level of commitment than a mere expression of interest, but which can customarily be obtained in time to support the application process.

Development of a project's financing plan and negotiation of terms and conditions with commercial financing institutions and potential equity sources should proceed in parallel with negotiation of loan guarantee terms and conditions. The level of project definition, development of financing plan, etc. required by the DOE Guidelines at the preliminary application stage is more appropriate for the detailed application phase, after an initial review indicates a project is a legitimate candidate for a loan guarantee and when negotiations on the financing term sheet are underway. In addition, many of the DOE Guidelines' requirements at the application stage (e.g., fully negotiated loan documents, legal opinions, closing checklists) reflect steps that will occur much further in the financing process, in some cases just before closing.

8. The DOE Guidelines require a cumbersome, five-step application process.

Industry Position

The DOE Guidelines prescribe an unnecessarily lengthy and cumbersome process: preliminary application, followed by invitation to submit an application, issuance of a Term Sheet by DOE, execution of a conditional commitment, followed by a final loan guarantee agreement. A three-step process should be sufficient: application, conditional commitment, and final loan guarantee agreement.

While a pre-application process may be warranted for sponsors that wish to obtain an expression of interest from DOE before investing time and resources in preparing an application (e.g., small or medium sized enterprises), project sponsors should have the option of proceeding directly to the application stage. After a preliminary review of the application by DOE, the process should move to the negotiation of the term sheet and issuance of a conditional commitment, culminating in the final loan guarantee agreement.

9. The DOE Guidelines exclude any methodology for determining in advance the Subsidy Cost or minimum terms necessary to qualify for loan guarantees

Industry Position

The DOE Guidelines exclude any methodology for determining the Subsidy and Administrative Costs or the related terms of the guarantee, making the value of the guarantee difficult to determine in advance. Given the extended, multi-step negotiation process required for the award of a guarantee, a significant commitment of time and development funds will be required and the project schedule and cost may be adversely impacted if attempts to negotiate a mutually acceptable Subsidy Cost and associated guarantee terms fail. For regulated utility sponsors, negotiation with state regulatory bodies concerning recovery of project costs will be impossible without some (reasonable) estimate of Subsidy Cost and the obligations related to the guarantee. Other federally sponsored guarantee programs (e.g., Ex-Im Bank, OPIC) are comparatively more transparent

The DOE Guidelines should clarify that, when determining subsidy costs, OMB will evaluate the entire risk profile of the project, including (but not limited to):

- ▶ Creditworthiness of the project and the project sponsor determined based upon, among other things, the credit rating, if any, of the project sponsor, and other quantitative and qualitative factors such as profitability, liquidity, capital structure, cash flow, default recovery analysis, and management and operator experience;
- ▶ Borrower's exposure to market and commodity risks;
- ▶ Borrower's exposure to vendor cost increases or construction delays.

Clearly, the more creditworthy the project, the lower the subsidy cost that should be assigned by OMB. Implementing regulations should recognize that greater equity investment, liquidity and management experience reduce default risk and, therefore, should result in lower subsidy cost.

10. The DOE Guidelines exclude the subsidy cost as well as fees paid for administrative costs from project cost.

Industry Position

The DOE Guidelines exclude the subsidy cost and the fees paid for administrative costs of issuing a loan guarantee from the definition of project cost. These costs are financing costs incurred and expended by the sponsors and should be included in project cost. These exclusions are inconsistent with the treatment of similar costs in commercial project financing and in other federal programs. For example, the exposure fee charged by Ex-Im Bank is not only counted as a project cost, but borrowers can elect to have that cost financed under the Ex-Im Bank loan or loan guarantee.