



**Energy Law**  
A Practice Focus

## The Nuclear Renaissance Continues . . .

But the Energy Department must act wisely on loans.

By KATHRYN M. SUTTON AND JOHN E. MATTHEWS

**T**he nuclear industry has undergone a metamorphosis. Just a decade ago, the conventional wisdom was that a third of the then-operating plants could be shut down because of economic considerations. Some companies were willing to sell operating nuclear plants

at bargain-basement prices just to get out of the business. No plant operating license had yet been renewed, and the development of new nuclear plants was not even on the horizon.

Today, in contrast, there is fierce competition to acquire nuclear assets. Plants are operating more safely and reliably than ever and, therefore, more profitably. Half of the operating reactors in the United States have been issued or are pursuing renewed operating licenses—adding 20 years of operation to each plant. The perceived future demand for uranium has soared, causing the price of a pound of uranium ore to jump from under \$15, less than four years ago, to well over \$100 in current spot market trading.

There is no doubt that the commercial nuclear power industry in the United States is in the midst of a renaissance and that the current operating fleet of 104 reactors, which currently produce some 20 percent of U.S. electricity, will continue to play a critical role in serving our nation's need for power.

Public sentiment about nuclear energy has shifted dramatically in the positive direction. Leading environmentalists, such as Greenpeace co-founder Patrick Moore, have recognized that nuclear energy is essential to any serious clean air, low carbon emission energy strategy. The Energy Policy Act of 2005 includes sweeping new incentives for new nuclear power plants that are broadly supported by both Democrats and Republicans.

In response to these developments, companies have announced plans to pursue the licensing of more than 25 new nuclear plants within the next two years. Industry leaders have little doubt that the new technologies can provide energy even

more safely and reliably than can current plants. Vendors believe that these technologies can be deployed at reasonable costs, on time, and on budget. The Nuclear Regulatory Commission has developed and implemented a new “one step” licensing process that should reduce regulatory risk. Traditional utilities and merchant generators thus are now spending tens of millions of dollars to license new plants.

Nevertheless, development of new nuclear plants is not a foregone conclusion. Two objectives critical to any success are largely controlled by the government: (1) implementing efficient and predictable regulatory processes for both licensing and constructing new plants; and (2) obtaining financing for the capital intensive investment (\$35 billion to \$50 billion) necessary for the first wave of new nuclear plants, which is predicated on federal loan guarantees provided for in the Energy Policy Act of 2005.

Unless these objectives are achieved over the next few years, the optimism for “new nuclear” could fade as quickly as it has resurged, and the development of new nuclear plants may falter.

### CORPORATE CONFIDENCE

Corporate America may be willing to commit tens of millions, but neither corporate board rooms nor Wall Street will commit the billions of dollars necessary for the first new nuclear plants unless there is a high degree of confidence that the regulatory processes will be proven as promised and that the government is willing to issue loan guarantees to help finance the first wave of plants.

In short, old memories die hard. In the late 1980s, one of the industry's financial nightmares occurred at Wall Street's door. The multibillion dollar Shoreham plant was fully completed through low-power testing, but never was permitted to enter meaningful commercial operation. Instead, the Long Island Lighting Co. had to seek bankruptcy protection and work out a deal with New York state for decommissioning the plant.

The Shoreham experience is the poster child for the past failure of the regulatory process. Today, regulatory certainty remains a prerequisite for accessing the huge amounts of capital needed to fund the construction of new plants.

Thus far, the NRC has done a credible job of establishing a transparent and predictable process for licensing new nuclear technologies and new sites. It has issued several design certifications providing advance approval for standardized plant designs, and it also issued two early site permits just this year. The NRC has promulgated a sound regulatory structure (in 10 C.F.R. Part 52) for licensing the construction and operation of proposed new plants through combined operating licenses before plant construction. This one-step licensing process replaces the old regulatory regime, where a full operating licensing proceeding was conducted after a plant was built.

If implemented as planned, these regulatory improvements address many of the concerns about regulatory uncertainty that plagued the industry in years past. Fully proving out these processes to establish that business can rely upon them, however, will take several years and depends on further policy-maker support and agency action.

First, the NRC will need to process a wave of applications for combined operating licenses through its regulatory and adjudicatory requirements in a timely fashion—that is, in three and a half years.

Second, the regulatory framework will need to live up to company expectations during a three- to four-year construction period after the issuance of a combined operating license. There is reason to be optimistic that the NRC will be successful. But a “chicken and egg” problem arises in that the financing necessary to prove out the licensing process will not appear until the process is proven, but the process cannot be proven without the financing.

### FEDERAL GUARANTEES

The Energy Policy Act of 2005 provides a solution to the financing problem: federal loan guarantees. In this program, administered by the Department of Energy, the federal government would assume the regulatory risk that private parties cannot, but taxpayers are protected because the program would be almost entirely funded by borrowers.

To their credit, Energy Department officials have been diligent in developing this program and published a proposed rule on May 16. Yet the proposed program structure simply is not workable. Bush administration officials have erected barriers in the loan guarantee program that hinder the efficient access to capital necessary to finance the first wave (10 to 15 units) of nuclear plants, which will cost \$3 billion to \$5 billion each.

The most significant problem in the administration’s proposed rule is a requirement that lenders provide at least 10 percent of the debt for a construction project without any guarantee from the government. In addition, this debt will be deeply subordinated to the guaranteed debt, effectively having no claim on the project assets until the guaranteed debt is paid in full.

Structured in this way, the Energy Department program requires that lenders arrange for a loan that has essentially the same risk profile as an unsecured equity investment. Only a speculative class of lenders will be willing to participate for this type of debt, which is entirely in second position behind the guaranteed debt. And they will expect very high returns (e.g., double-digit interest rates, as opposed to 5 percent to 6 percent interest for government-guaranteed debt).

Even if the increased interest costs were not problematic, these two different kinds of debt require very different kinds of lenders: one that is risk averse and another that is risk tolerant. The administration’s proposed rule, however, may shut out the risk-averse type of lender.

The reason is a “no stripping” requirement that the nonguaranteed debt could not be sold apart from the government-guaranteed debt. For any portion of debt that is sold, each new lender would have to hold a pro-rata share of both the low-risk guaranteed debt and the high-risk nonguaranteed debt. This means that nuclear projects would not be able to access the government-backed securities market, where risk-averse insurance companies, pension funds, and similar lenders with high credit-quality requirements make large amounts of lending available. Instead, these lenders would not participate because they would not be willing to hold the riskier nonguaranteed debt.

Arguably, esoteric lending structures could be constructed to address this problem, but such mechanisms add transaction costs, and the Department of Energy might still view them as inconsistent with the “no stripping” rule.

### ALL THE DEBT

Finally, the requirement for a second layer of deeply subordinated debt is all the more objectionable given Congress’ repeatedly stated intention that the Loan Guarantee Program was meant to cover 100 percent of the project debt (up to 80 percent of the project’s cost)—not only 90 percent of debt, as the administration’s rule proposes.

The chairmen and ranking members of the House Energy and Commerce Committee, as well as its Subcommittee on Energy and Air Quality, wrote to President George W. Bush in early May expressing this view. They affirmed the nation’s strategic need for new nuclear power plants. Moreover, the Senate Energy and Natural Resources Committee passed a bill in early May that included an unequivocal statutory mandate to accomplish this result.

Fundamentally, Congress always has envisioned a public-private partnership, with the private sector taking about 20 percent of the financial risk for new nuclear plant development. Given the multibillion-dollar commitments required from private companies, this in itself is a suitable incentive to ensure that only creditworthy projects move forward. It’s simply not necessary to force lenders to take nonguaranteed debt.

As we look forward to the second phase of the nuclear renaissance, it appears that the NRC’s challenge to achieve regulatory certainty in its processes is a significant hurdle, but one that is surmountable. Unfortunately, progress on the regulatory front is of limited value unless the industry can obtain financing of the size and scope necessary to sustain the development of the first wave of new nuclear power plants.

Prospects for this financing hinge on the outcome of the pending Energy Department rule-making to establish regulations for its loan guarantee program. If the federal government will not stand behind project loans and facilitate efficient access to capital for new nuclear plants, this important link in a low carbon emission energy strategy likely will be broken.

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