

Lexington Institute

ENERGY REGULATION

Trendwatch

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DEPARTMENT OF ENERGY ISSUES FINAL RULE ON LOAN GUARANTEE PROGRAM

The Department of Energy (DOE) issued the final rule amending regulations for the Loan Guarantee Program, which Congress established to stimulate the expansion of energy sources that do not emit greenhouse gasses and the creation of innovative energy technologies. This final rule, which was announced December 7, will allow financial institutions and other investors to actively participate in the program.

According to DOE, which is now authorized to guarantee up to \$32 billion in loans, this rule change will allow the Loan Guarantee Program to consider financing projects in conjunction with other lenders.

Observers noted that one major impact of the changes will be to make it easier for the program to offer loan guarantees for large-scale nuclear reactor projects. In particular, the final rule eliminated the prior requirement that the Department receive first lien on all project assets as a condition of its guarantee. The ruling merely confirms such a requirement as one option the Energy Secretary may exercise among other possible collateral arrangements, potentially opening the door for guarantees to projects with multiple participants. ...continued on page 4

DOE ANNOUNCES \$620 MILLION FOR SMART GRID PROJECTS

The Department of Energy (DOE) announced in late November that it would award \$620 million to 32 demonstration projects for advanced smart grid technologies. Projects include large-scale energy storage systems, smart meters, and distribution and transmission system monitoring devices. Awards were divided into two groups: smart grid demonstrations and energy storage demonstrations.

Smart grid demonstration grants, totaling \$435 million, were awarded to 16 projects to support integrated, regional smart grids in 21 states. Grant winners in this category include: the Battelle Memorial Institute, Pacific Northwest Division (\$89 million); Columbus Southern Power Company/AEP Ohio (\$75 million); and the Los Angeles Department of Water and Power (\$60 million).

The Battelle Pacific Northwest grant will test new combinations of devices, software, and advanced analytical tools, involving more than 60,000 customers in Idaho, Montana, Oregon, Washington, and Wyoming. The Pacific Northwest Smart Grid Demonstration Project will provide two-way communication between distributed generation, storage, and demand assets and the existing grid and advance interoperability standards and cyber security approaches. ...continued on page 3

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E.P.A. MAY RAISE ETHANOL BLENDS TO 15 PERCENT BY MID-2010

The Environmental Protection Agency (E.P.A.) announced December 1, 2009, that the agency is likely to increase the allowable limit of ethanol content in fuel blends to 15 percent but postponed the final decision until mid-2010. The current ethanol blend limit is 10 percent unless vehicles are specifically designed to handle higher blends.

Growth Energy, a biofuels industry association, requested a waiver from the E.P.A. to allow for the five percent increase in March 2009. While testing is not complete, initial E.P.A. engineering assessments reportedly indicate that vehicles produced in or after 2001 can likely accommodate the higher ethanol blend levels.

“The Department of Energy (DOE) is conducting a series of studies on 19 vehicles to evaluate the effect of a higher blend of ethanol on vehicles when used over many thousands of miles.”

The Department of Energy (DOE) is conducting a series of studies on 19 vehicles to evaluate the effect of a higher blend of ethanol on vehicles when used over many thousands of miles. Complete testing data are already available on two vehicles, which preliminarily seem to confirm the safety of increased ethanol blends in newer cars, and data should be available for an additional 12 vehicles in May. All 19 vehicle studies should be concluded by August 2010.

According to a letter from the E.P.A. to Growth Energy, if the test results continue to indicate that the increased ethanol blend levels are safe for newer vehicles, the agency would “be in a position to approve E-15 for 2001 and newer vehicles by the mid-year timeframe.”

The Alliance of Automobile Manufacturers supports postponing the E.P.A.’s final decision until the federal government can prove that increasing the ethanol blend does not negatively affect existing engines, fuel lines, and emission systems, stating, “Widespread failures resulting from higher blends of ethanol would be costly to automakers, a setback for the biofuels industry and most of all a disaster for the driving public.”

A coalition of E-15 opponents, including the Environmental Working Group, Grocery Manufacturers Association, National Marine Manufacturers Association, National Petrochemical & Refiners Association, National Resources Defense Council, and the Outdoor Power Equipment Institute, were likewise relieved that the E.P.A. has not yet issued the waiver. The group has a broad array of safety concerns, including effects on the global food supply and air quality and consumer safety issues associated with boats, utility vehicles, lawnmowers, and other fuel-charged equipment.

The National Marine Manufacturers Association and the Alliance of Automobile Manufacturers are equally concerned about the bifurcation of fuel supply for drivers and boaters. If the increased ethanol blend is only proven safe for newer vehicles, consumer confusion could lead to misfueling incidents. Misfueling could result in personal injury, irreversible damage to older cars, and vehicle operational problems, according to the National Petrochemical & Refiners Association. The E.P.A. is currently assembling a working group to address fuel pump labeling concerns and make recommendations on final labeling requirements, should the ethanol blend increase ultimately be approved.

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DOE ANNOUNCES \$620 MILLION FOR SMART GRID PROJECTS*continued from page 1*

The [AEP Ohio](#) grant will include the installation of roughly 110,000 advanced electricity meters and new distribution grid technologies in a 150 square mile area of central Ohio. The AEP Ohio gridSMART Demonstration Project will include 13 different technologies, including distribution automation and control, smart meters and appliances, home area networks, plug-in hybrid electric vehicles, energy battery storage, and renewable generation sources.

The Los Angeles Department of Water and Power Smart Grid Regional Demonstration Project is a partnership with local research institutions and will include gathering data on how consumers use energy in a variety of systems, testing on the next generation of cybersecurity technologies, and how to integrate a significant number of plug-in hybrid electric vehicles onto the grid.

The second category of grants, totaling \$185 million, was awarded to an additional 16 projects to fund utility-scale energy storage projects, including advanced battery systems and flow batteries, flywheels and compressed air energy systems. Grant winners in this category include: New York State Electric & Gas Corporation (\$29.6 million to help fund a Compressed Air Energy Storage technology plant using an existing salt cavern); California's Pacific Gas & Electric (\$25 million to build an underground Compressed Air Energy Storage plant using saline porous rock formation as the storage reservoir); and Southern California Edison Company (\$25 million for the Tehachapi Wind Energy Storage Project, which will deploy and evaluate an 8 MW utility-scale lithium-ion battery technology to aid in the integration of wind generation into the electric supply).

According to DOE, the American Recovery and Reinvestment Act grants will be leveraged with \$1 billion from the private sector. A complete list of the [smart grid awards](#) is available through the DOE website.

"Given the variety of conversion processes involved, it is critical that energy storage technologies be matched to potential applications.... Among the most important requirements for stationary utility storage, which ranges from half a megawatt to hundreds of megawatts, are storage technologies that are low-cost and have a high cycle life, meaning a large number of charge and discharge cycles. High reliability, efficiency, environmental acceptability, and safety are also important."

Dr. Steven Koonin, Under Secretary of Energy for Science,
Testimony to U.S. Senate Committee on Energy and Natural Resources, December 10, 2009.

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DEPARTMENT OF ENERGY ISSUES FINAL RULE ON LOAN GUARANTEE PROGRAM

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According to a [November 2009 report](#) by Citigroup Global Markets, “In our view, it is extremely unlikely that private sector developers will be willing or able to take on the construction, power price, and operational risks of new nuclear stations. The returns would need to be underpinned by the government and the risks shared with the taxpayer/consumer.” The report, which cited cost escalations in construction costs for new nuclear projects as a contributing factor, argued that minimum power prices (including capacity payments) and government-sponsored support for financing may be necessary to bolster the viability of new new nuclear power plants. It noted the need for government interventions to improve the financing environment and help alleviate the higher cost of debt for new nuclear construction if new nuclear is to play a significant role in energy policy moving forward.

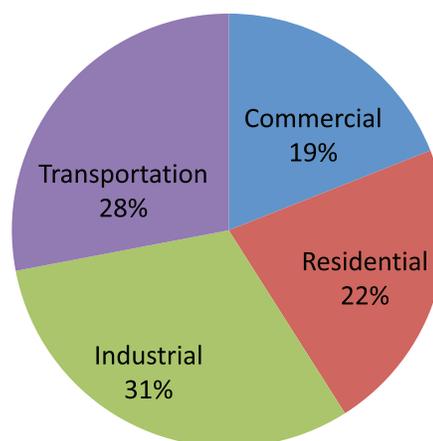
Other changes include allowing revised amortization schedules, shorter or longer, for major projects and revisions to intercreditor agreements.

This rule comes on the heels of the appointment of Jonathan Silver to head DOE’s [Loan Program Office](#), where he is responsible for the Loan Guarantee Program and the Advanced Technology Vehicles Manufacturing loan program. Silver, a former venture capitalist, has worked with firms that have invested in alternative energy. Prior to Silver’s arrival, both loan programs that he oversees have awarded venture-backed companies as beneficiaries, including [Solyndra](#) through the Loan Guarantee Program and [Tesla Motors](#) through the Advanced Technology Vehicles Manufacturing Loan Program (ATVM), among others. Silver will also manage the Department’s alternative energy investments.

Details about the Loan Guarantee Program can be found at www.lgprogram.energy.gov. DOE has an [application site](#) for the program and has posted [suggestions](#) for interested candidates.

Share of Energy Consumed by Major Sectors of the U.S. Economy, 2008

- The industrial sector includes manufacturing, agriculture, mining, and construction.
- The transportation sector comprises vehicles that transport people or freight, such as, cars, buses, trains, ships, trucks, and aircraft.
- The residential sector consists of homes and apartments.
- The commercial sector includes buildings such as offices, malls, schools, hospitals, hotels, restaurants, warehouses, and more.



Source: Energy Information Administration, Annual Energy Review 2008.