

Let's Reset Our Energy Policy Starting with Loan Guarantees

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It's fashionable today in the name of reducing the federal deficit to suggest budget cuts. What's too often overlooked is eliminating off-budget funding of questionable or, even worse, money-losing commercial ventures. A prime example of such is the Department of Energy's clean energy federal loan guarantee program.

If Congress and the White House were serious about cutting unnecessary financial commitments, they could start by eliminating this program that has a dubious policy rationale and checkered past. And there is no need to stop with loan guarantees. Even more radical elimination of subsidies for favored forms of energy investment could save hundreds of billions over the next decade and improve the performance of the economy. The idea behind all these reforms is to level the playing field for all forms of energy, so that they would compete based on their ability to meet environmental and energy goals rather than on their ability to deal in favors for particular interests.

The starting point for this more ambitious agenda might be where the public spotlight is brightest and where the tilt in the playing field is least connected to systematic energy or environmental policy objectives. After the Solyndra controversy, the spotlight is clearly on federal clean energy loan guarantees, but not always for the right reasons. The waste of taxpayers' money on Solyndra has attracted attention, but the problems of loan guarantees are more fundamental than one, or even several, failed projects.

From a first principles point of view, loan guarantees are a solution seeking a problem. No one has identified a valid set of problems that they are intended to address. Rather, one hears a litany of excuses, usually a unique market failure that prevents some particular kind of project or technology from moving forward.

Unlike the broad externalities that justify environmental policy in general, such as the public goods nature of clean air and energy security, there is an ad hoc flavor to the excuses given for loan guarantees. A frequently encountered excuse is lack of access to capital for early stage (e.g. unproven) technologies. But it is far from clear that providing low-cost debt financing is the right solution. There are plenty of private sector funds that invest in early stage technologies, and they presumably have capabilities to manage the flow of funds, development of companies and technologies, and track record necessary to do so. What competency does the government have to provide this support, especially when it is denied by those more expert firms? In fact, it is more likely that the incredible bureaucracy associated with dealing with the LGPO, Treasury, and OMB stifles the development of the company and its technology. What is necessary for success in the marketplace: entrepreneurship or the ability to navigate (and manipulate) the government? The Solyndra affair does suggest the answer to this question.

A bigger issue is the complete lack of competence in the government to judge the prospects for a company or technology – and the strong pressures to make the award based on political connections and Congressional interest in local pork. Private industry has built the infrastructure to assess and manage risk: It is called the financial services industry. It takes time, effort, and resources to build the institutions, human and intellectual capital and processes to look at an opportunity, assess its risk, and price capital. And that expertise and experience can't be built overnight, or even in a year or two in the government. Further, those financial institutions, who are expert at identifying, managing, and pricing risk, take into account the likelihood that some elements of the portfolio will fail. Hence, the cost of the capital reflects a margin adequate to cover the risk of default. Some of the projects in the clean energy loan guarantee program are generation projects backed by power purchase agreements with

credit-worthy counterparties. Since there is much less risk in those projects than in entrepreneurial ventures to prove a new technology, the case for providing subsidized capital is hard to find. For the plants that manufacture clean energy equipment there is the merchant risk that they may not be able to survive while pricing their product competitively and lots of it. So why is it a good idea to extend debt at a below market rate when the risk of repayment is so uncertain? The private market is available to these folks; it just allocates the capital appropriately (e.g. venture capital for an equity stake at a high price to reflect risk versus debt at the federal T bill rate plus 220 basis points).

Some of the abuses that became quite apparent when energy loan guarantees appeared in the 1970s have been addressed, so that it is no longer quite so easy to use loan guarantees to hand out subsidies without any accountability in the budgetary and appropriation process. Nevertheless, that loan guarantees are contingent commitments to future payments makes their numbers easy to manipulate in budget and deficit games.

Some programs, including the clean energy loan guarantee program, are subject to rules intended to prevent them from being a pure giveaway to companies that do not need financial support. These rules require that it be commercially infeasible to obtain financing from normal sources and that the project and technology have a high probability of success. With capital markets that are either efficient or excessively prone to risk-taking these conditions will only exist when a company's balance sheet or management are judged to be so poor that they cannot be trusted to complete even a potentially economic project. Thus adverse selection is built into the rules.

Adverse selection implies that even if the Department of Energy is required to charge an actuarially fair fee, the resulting collections are not likely to cover actual defaults. This is because financially sound companies that are confident they have a profitable prospect will forego the loans, and unsound companies or those with technologies on which they do not want to risk their own money will take the loan guarantees up. As Solyndra has proved, a bit of an interest rate subsidy will not be enough to cover a fundamentally flawed business plan that anticipated further government action to make the ongoing business profitable.

Thus the loan guarantee program has become an exercise in organized hypocrisy that perverts incentives of economic “experts” as well as promoters and politicians. It becomes necessary for promoters to plead poverty, because if a project is “bankable” through ordinary financial intermediaries it cannot receive a loan guarantee. The loan guarantee program, in short, is designed to skew the playing field in favor of badly run companies with poor credit and against successful, well managed ones.

Critics of loan guarantees who observe this bias often point out that loan guarantees would be unnecessary if the technology in question were as good as its promoters claimed. The need to address this criticism in turn creates demand for analysts who can describe the “market failures” that keep good projects with good management from being able to raise capital by normal means. The resulting controversy then forces legislators to evaluate arcane arguments about “principal-agent” problems and the “economics of information” – or leaves them free to pursue pure rent-seeking with assurance that their cover is so arcane that in no specific case can it be refuted with any clarity. And it is always possible to hope that the government will get its money back. All this makes the consequences of loan guarantees easy to conceal from voters and a highly attractive means of distributing the technology pork barrel.

Loan guarantees, then, by their very nature lead to a misallocation of government support for new technologies. They shift priorities for government funding into support for commercial enterprises intended to produce energy or equipment, when a valid application of reasoning about market failures in R&D leads to the clear conclusion that most government funding should go to early stage R&D and not to commercial deployment of uneconomic technologies. Indeed, the rent seekers and their political allies are quite happy to starve research and development for funds in order to move as much as possible into large scale commercial enterprises where money can be made and votes claimed.

It is not just loan guarantees for doomed ventures and technologies that are draining the budget. The Department of Energy administers a wide variety of direct loans and grants that have the same effect of distorting the playing field in favor of energy sources and equipment

producers with political clout. There are massive tax expenditures for producing favored forms of energy and for household and business purchases of particular kinds of energy efficient equipment. There are also hidden costs, which drain consumers' pocketbooks and divert investment away from productive purposes. These costs are imposed by the regulations and mandates that order car manufacturers, fuel producers, electric utilities and ordinary people to bear higher costs in order to benefit specific energy interests, from small oil producers to manufacturers of more costly light bulbs. Eliminating these mandates and regulations would not only relieve businesses and consumers of those burdens, but also produce additional tax revenue as the economy is free to grow more rapidly.

Based on data in the 2013 Budget of the United States, eliminating loans and loan guarantees would eliminate about \$5.5 billion of federally sponsored borrowing and \$46 billion in direct loans that would be outstanding in 2013. Eliminating all programs in the Department of Energy beyond basic research that are designed to support favored energy activities – loan guarantees, commercialization programs, grants and support for national laboratories — would reduce spending by \$22 billion in 2013 and about \$100 billion from 2013 to 2022. Repealing regulatory authorities would produce small but useful reductions (perhaps \$100 million) in spending on the actual regulator's salaries and expenses, and more importantly would free up income and capital for more productive uses throughout the economy. Eliminating special tax treatment for selected types of energy production and efficiency investments could increase revenue in 2013 by about \$11 billion. In total, savings for 2013 alone could total \$33 billion in lower spending and increased tax revenue and a reduction of over \$50 billion in additional indebtedness.

The industries enriched by these programs, the members of Congress who use them to be re-elected, and the self-appointed gurus of energy efficiency will all complain that these actions will leave the United States without an energy policy. That is the whole point of a reset: To move from a dysfunctional and prejudiced system to a set of neutral incentives that would let markets help make the selections necessary to update and optimize America's energy mix for energy security and carbon abatement.

There are, in fact, two ways to restart energy policy that can deal with both the legitimate policy goals of energy security and environmental protection. They are an oil import fee and a carbon tax. An oil import fee in the range of \$10 per barrel would increase incentives for domestic oil exploration and development, for less driving and for production of more efficient automobiles. A carbon tax of \$10 per ton on all fuels burned in the United States would provide a uniform incentive across the economy to conserve energy in proportion to its carbon content, substitute lower carbon fuels and processes, and develop low carbon technologies for the future. These policies would address the true issues of energy security and environmental protection and end the hypocrisy of pork barrel programs masquerading as solutions for energy and environmental policy.

Taking advantage of these revenue sources would also provide \$1 trillion in truly additional revenues over the next 10 years. Substituting economic incentives for regulation of energy use would reduce the deadweight loss of energy policy by over 80%. And, if backed by a commitment to veto any attempt to replicate existing pork-barrel programs by means of exemptions and special provisions of the two taxes, the reset would break the hold of re-election seeking politicians and the lobbyists that support them over energy technology choices.

Of course, even without carbon taxes and oil import fees, getting rid of loan guarantees could produce substantial savings without weakening energy security or environmental achievements. But once one gets started by clearing the deck of loan guarantees, it would be sensible to go further.