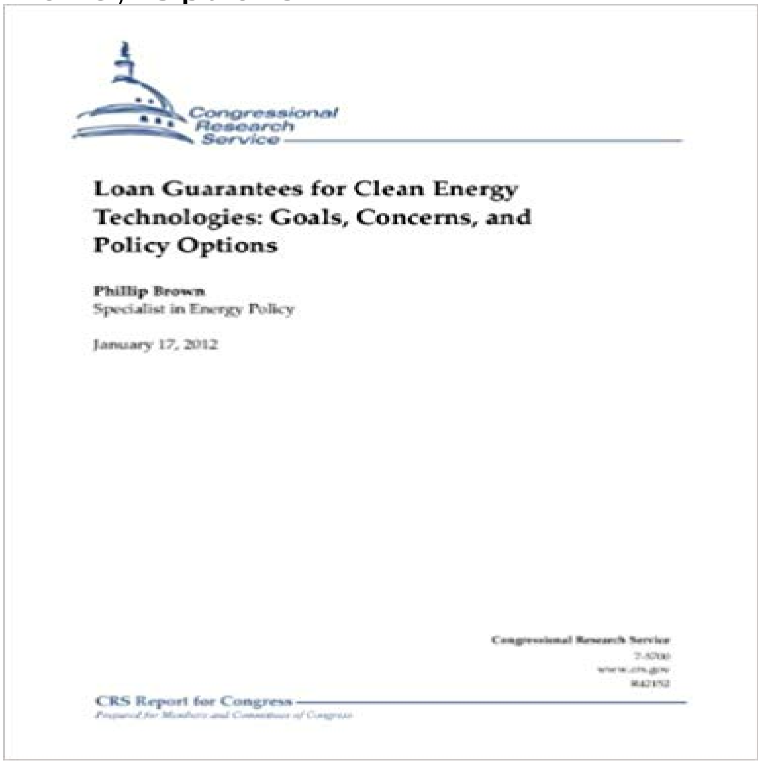
Loan Guarantees for Clean Energy Technologies: Goals, Concerns, and Policy Options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Government guaranteed debt is a financial tool that has been used to support a number of federal policy objectives: home ownership, higher education, and small business development, among others. Loan guarantees for new energy technologies date back to the mid-1970s, when rapidly rising energy prices motivated the development of alternative, and renewable, sources of energy. Recently, the Energy Policy Act of 2005 created a loan guarantee program for innovative clean energy technologies (nuclear, clean coal, renewables) commonly known as Section 1703. The American Recovery and Reinvestment Act of 2009 created Section 1705, a temporary loan guarantee program focused on deployment of renewable energy technologies and projects.Loan guarantee authority for the Department of Energy Loan Programs Office (LPO) Section 1705 program ended on September 30, 2011, prior to which approximately $16.15 billion of loans were guaranteed for a variety of clean energy projects. In August 2011, the high-profile bankruptcy of Solyndra, the first company to receive a Section 1705 loan guarantee, resulted in a congressional investigation and increased scrutiny of the DOE Loan Guarantee Program. As a result, Congress may decide to evaluate the use of loan guarantees as a mechanism for supporting the development and deployment of clean energy technologies. This report analyzes goals and concerns associated with innovative clean energy loan guarantees.Fundamentally, loan guarantees can provide access to low-cost capital for projects that might be considered high risk by the commercial banking and investment community. There are many goals for using loan guarantees to support innovative energy technology commercialization and deployment. Commercializing new technologies that may increase the performance and reduce the cost of clean energy generation is one objective. Also, the potential global market for clean energy technologies and systems is substantial (trillions of dollars over the next 25 years by some estimates) and loan guarantees could help position U.S. manufacturers to supply product for this growing market. Loan guarantees may also result in near- and long-term job creation as well as contribute toward reducing emissions of various pollutants.The high-risk nature of clean energy projects, however, raises some concerns about the use of loan guarantees as a mechanism to encourage the deployment of new technologies. First, loan repayment demands cash flow from development stage companies at a time when they may already have high cash flow requirements, so loan repayment obligations could actually increase the risk of default for certain projects. Second, at a project level, the governments potential return is not commensurate with the risk being assumed. Third, loan guarantees for clean energy technologies are essentially long-term commitments in a dynamic and evolving marketplace. As a result, technologies supported today could be obsolete in less than a decade, thereby increasing the risk of loan default. Finally, federally managed loan guarantee programs may be subject to certain pressures that could result in less-than-optimal decision making.Should Congress decide to continue the use of government financial tools as a clean energy technology deployment support mechanism, it may wish to consider various policy options for future initiatives. Some policy options could include (1) using grants or tax expenditures instead of loan guarantees; (2) taking equity positions in new technologies and projects through a new government-backed venture-capital-like organization; (3) authorizing the use of flexible management tools such as stock warrants, portfolio management, and convertible equity; and (4) creating a dedicated clean energy financial support authority to manage federal clean energy deployment investments. Each of these policy options is explored and discussed in this report.

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