

Department of Energy Loan Programs: Title XVII Innovative Technology Loan Guarantees

June 23, 2020

The Department of Energy’s (DOE’s) Loan Programs Office (LPO) manages the Title XVII Innovative Technology Loan Guarantee Program, the focus of this Insight, and the [Tribal Energy Loan Guarantee Program](#) (TELGP). **Table 1** provides a high-level comparison of these programs. LPO also manages the [Advanced Technology Vehicles Manufacturing](#) (ATVM) direct loan program.

Established by the Energy Policy Act of 2005 (EPACT05 Title XVII, P.L. 109-58), as amended in 2009 (Sec 406, P.L. 111-5), the Title XVII program has supported projects under two separate loan guarantee authorities with different characteristics (see **Table 1**).

1. *Section 1703* authority is currently active and to date has committed funds to one project, and,
2. *Section 1705* authority expired in September 2011 and committed funds to 28 projects.

As with all [federal credit programs](#), Title XVII requires that a [subsidy cost](#) be paid—through appropriations and/or payment by the borrower—prior to finalizing a loan guarantee agreement. The Federal Credit Reform Act of 1990 (FCRA; Section 13201 of P.L. 101-508) requires that estimated lifetime net costs of new loans and loan guarantees be recorded in the budget year in which the loans are disbursed ([2 U.S.C §661c](#)). The costs of these credit programs, referred to as subsidy costs, are measured on a net present value (NPV) basis—which is the combined value of expected future cash receipts, less expenditures adjusted or discounted, calculated using an interest rate based on Treasury securities.

Table 1. Department of Energy Loan Guarantee Programs

	Innovative Technology Loan Guarantee Program (Title XVII)		Tribal Energy Program (Title XXVI)
	Section 1703	Section 1705	Section 503 ^a
Establishment Year	2005	2009	2005
Program Authority	Ongoing	Expired September 30, 2011	Ongoing
Existing Loan Guarantee Authority	\$23.9 Billion	N/A	\$2 Billion

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IN11432

	Innovative Technology Loan Guarantee Program (Title XVII)		Tribal Energy Program (Title XXVI)
Eligibility Criteria	Projects must: (1) avoid, reduce, or sequester air pollutants or anthropogenic greenhouse gas emissions; and (2) employ new or significantly improved technologies	Projects were limited to: (1) renewable energy systems; (2) electricity transmission; and (3) leading edge biofuel projects, but could employ commercial technology	Projects must be for energy development by a federally recognized Indian tribe or Alaska Native Corporation
Appropriations for Subsidy Costs	\$161 million, available until expended, for a portion of subsidy costs for Renewable Energy and Efficient Energy projects	\$2.5 billion (no longer available)	\$8.5 million available until expended
Loan Guarantee Commitments	One project commitment	28 project commitments	None

Source: CRS.

Notes: Section 1703 also includes eligible project types (42 USC §16513). Generally, the borrower pays §1703 subsidy costs. Under §1705, appropriations covered these costs.

a. P.L. 102-486, Title XXVI, §2602, as amended by P.L. 109-58, Title V, § 503(a); 25 U.S.C. §3501 et seq.

Innovative Technology Loan Guarantees

Title XVII of EPACT05 ([42 U.S.C. §16511 et seq.](#)) established a program that authorizes the Department of Energy to enter into loan guarantee agreements for projects that meet certain criteria. The Section 1703 and Section 1705 loan guarantee authorities each have unique characteristics, including availability, loan authority levels, eligibility criteria, credit subsidy appropriations, and project awards.

Section 1703 Loan Guarantees

Section 1703 of EPACT05 provides the original and ongoing authority for the Title XVII loan guarantee program. Eligible projects must (1) avoid, reduce, or sequester air pollutants or anthropogenic greenhouse gas emissions, and (2) employ new or significantly improved technologies. These eligibility criteria are the basis for [Advanced Fossil Energy](#), [Advanced Nuclear Energy](#), and [Renewable Energy and Efficient Energy](#) (RE&EE) loan guarantee open solicitations that are currently available. Because of limited appropriations—\$161 million for RE&EE subsidy costs—most borrowers pay for all, or a portion of, the subsidy cost prior to finalizing a loan guarantee agreement. Since establishment of the Title XVII program in 2005, one project has received loan guarantees under Section 1703 authority: the [Vogle nuclear power project](#) (units 3 and 4) in Georgia.

Section 1705 Loan Guarantees

The American Recovery and Reinvestment Act of 2009 (ARRA, P.L. 111-5), amending EPACT05, created the Section 1705 temporary loan guarantee authority. This loan guarantee authority, specifically intended to support rapid deployment of renewable energy, electricity transmission, and leading edge biofuel projects, expired on September 30, 2011. Eligible projects were not required to employ new or significantly improved technology. Furthermore, approximately \$2.5 billion—after rescissions and transfers—were appropriated for subsidy costs. These two characteristics—credit subsidy appropriations and commercial technology eligibility—resulted in this program being attractive to borrowers and may explain why more projects have received assistance under Section 1705 than under Section 1703

authority. Twenty-eight projects received loan guarantee commitments including more than \$14 billion of financial support provided under this temporary authority.

Considerations for Congress

Limited Section 1703 utilization is likely due to the combined effects of (1) requiring projects to employ new/significantly improved technologies, and (2) requiring borrowers—due to limited appropriations—to pay either the entire subsidy cost or a portion thereof. Incorporating new technologies increases project financial and default risk. These risks directly affect the project’s credit rating, which in turn has an effect on the subsidy cost. Generally, the higher the finance and default risks the larger the subsidy cost. As a result, lower interest rate benefits provided by federal loan guarantees could be offset by the requirement for borrowers to pay the subsidy cost.

Proposals to amend Title XVII generally range from eliminating the remaining loan authority and rescinding some appropriations—this option is part of the Trump Administration’s [FY2021 budget proposal](#)—to expanding program eligibility, easing the new/improved technology requirement, and paying for subsidy costs—as in [draft text](#) for the Climate Leadership and Environmental Action for our Nation’s (CLEAN) Future Act. Other proposals in the 116th Congress would modify Title XVII to make the program more attractive to borrowers. For example, the substitute amendment to the American Energy Innovation Act (S. 2657) would not require qualifying projects that receive support from a “State Energy Financing Institution” to employ new/improved technologies. If enacted, this Title XVII amendment could make the program more attractive for certain projects.

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