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Tax Credit Bonds: Overview and Analysis

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Summary

Nearly all state and local governments sell bonds to finance public projects and certain qualified private activities. The federal government subsidizes state and local bond issuances through a number of policies. One such policy is the Tax Credit Bond (TCB), which provides a tax credit or direct payment to the issuer or investor that is proportional to the bond's face value. TCBs represent an alternative to tax-exempt bonds, which exclude interest earnings from the investor's federal taxable income. This report explains the tax credit mechanism and describes the market for TCBs.

The majority of TCBs are designated for a specific purpose, location, or project. Issuers use the proceeds for public school construction and renovation; clean renewable energy projects; refinancing of outstanding government debt in regions affected by natural disasters; conservation of forest land; investment in energy conservation; and for economic development purposes. The relative appeal of TCBs and municipal bonds is dependent on issuer and investor characteristics and on economic conditions.

The first tax credit bonds, qualified zone academy bonds (QZABs), were introduced as part of the Taxpayer Relief Act of 1997 (P.L. 105-34) and first issued in 1998. Clean renewable energy bonds (CREBs) were created by the Energy Policy Act of 2005 (P.L. 109-58), and were later modified as "new" CREBs in the Emergency Economic Stabilization Act of 2008 (P.L. 110-343). Gulf tax credit bonds (GTCBs) were created by the Gulf Opportunity Zone Act of 2005 (P.L. 109-135). Qualified forestry conservation bonds (QFCBs) were created by the Food, Conservation, and Energy Act of 2008 (P.L. 110-246). Qualified energy conservation bonds (QECBs) and Midwest Disaster Bonds (MWDBs) were created by the Emergency Economic Stabilization Act of 2008 (P.L. 110-343).

The American Recovery and Reinvestment Act of 2009 (P.L. 111-5, ARRA) included several bond provisions that use a tax credit or issuer direct payment. Specifically, ARRA created Qualified School Constructions Bonds (QSCBs), Build America Bonds (BABs) and Recovery Zone Economic Development Bonds (RZEDBs). Unlike other tax credit bonds, the interest rate on the BABs and RZEDBs is a rate agreed to by the issuer and investor and the issuers receive direct payments from the Treasury. In contrast, the Secretary of the Treasury sets the credit rate for the other TCBs. The credit rate differs across TCB programs. The QZAB and QSCB credit rate is set at 100% and the "new CREB" and QECB credit rate is set at 70% of the interest cost. In contrast, the BAB tax credit rate is 35%.

Most of the TCBs to date have been established as temporary tax provisions. The authority to issue several TCBs, including GTCBs and CREBs, has expired in recent years. The only permanent TCB, QECBs, are currently fully subscribed. Bonds that are no longer being issued may still be held by the public. In the 114th Congress, multiple bills have been introduced to extend or modify certain TCB programs. The Consolidated Appropriations Act, 2016 (P.L. 114-113) extended the issuance authority of QZABs for the 2015 and 2016 tax years, and provided for $400 million of issuing capacity for each year. Other legislation, including H.R. 2676 and S. 1515 would extend the BAB program indefinitely. Additionally, the President's FY2017 Budget included a number of proposals related to TCBs, including the creation of a new TCB for certain infrastructure programs.

Contents

Introduction 1
The Details of Tax Credit Bonds 1
The Mechanics of TCBs 2
Tax Credit Bond Stripping 4
The Term of TCBs 4
Application of Davis-Bacon Labor Standards 5
Tax Credit Bonds vs. Other Bonds 5
Appeal to Investors 5
Appeal to Issuers 6
Influence of Economic Conditions 6
Allocation and Purpose of Tax Credit Bonds 8
Qualified Zone Academy Bonds 9
Qualified School Construction Bonds 9
Clean Renewable Energy Bonds 10
New Clean Renewable Energy Bonds 11
Qualified Energy Conservation Bonds 11
Forestry Conservation Bonds 12
Gulf Tax Credit Bonds 12
Midwest Disaster Bonds 13
Build America Bonds 13
Recovery Zone Economic Development Bonds 13

Figures

Figure 1. Interest Rates for Municipal, 10-Year Treasury, and Corporate Bonds 7

Tables

Table 1. Tax Credit Bond Acronyms 2
Table 2. Authorization Levels of Tax Credit Bonds 8

Contacts

Author Information 14

Introduction

Nearly all state and local governments sell bonds to finance public projects and certain qualified private activities. The federal government subsidizes state and local bond issuances through a number of policies. The mostly widely utilized policy instrument is the tax-exempt bond, which excludes bond interest payments received from the investor's federal taxable income. In contrast, interest payments from other types of bonds, such as corporate bonds, are included in federal taxable income. Because of the difference in taxability, state and local government tax-exempt bonds—often referred to as municipal bonds—offer a lower pre-tax interest rate than corporate bonds, which reduces the interest costs owed by state and municipal governments.[1]

Tax credit bonds (TCBs) offer an alternative to municipal bonds, providing a tax credit or direct payment proportional to the bond's face value in lieu of the tax exemption. Most TCBs are designated for a specific purpose. TCBs have been used by issuers to finance public school construction and renovation; clean renewable energy projects; refinancing of outstanding government debt in regions affected by natural disasters; conservation of forest land; investment in energy conservation; and for economic development purposes. The relative appeal of TCBs and municipal bonds is dependent on issuer and investor characteristics and on economic conditions.

Many recent TCBs are not eligible for new issuances under current law, due either to the expiration of issuing authority or to full subscription of the TCB issuing limit. Bonds that are no longer being issued may still be held by the public. In the 114th Congress, multiple bills have been introduced to extend or modify certain TCB programs. The Consolidated Appropriations Act, 2016 (P.L. 114-113) extended the issuing authority of QZABs for the 2015 and 2016 tax years, and provided for $400 million of issuing capacity for each year. Other legislation, including H.R. 2676 and S. 1515 would extend the BAB program indefinitely. Additionally, the President's FY2017 Budget included a number of proposals related to TCBs, including the creation of a new TCB for certain infrastructure programs.

The Details of Tax Credit Bonds

There are several types of TCBs, most of which are provided for a specific purpose, location, or type of project. Issuers of Qualified Zone Academy Bonds (QZABs) are required to use the proceeds to finance public school partnership programs in economically distressed areas. Clean Renewable Energy Bonds (CREBs) are designated for clean renewable energy projects. Midwestern Disaster Bond (MWDB) proceeds were for the refinancing of outstanding government debt in regions affected by the Midwestern storms and floods in the spring and summer of 2008. Qualified Forestry Conservation Bonds (QFCBs) are intended to help non-profits or government entities purchase and conserve forest land. Qualified Energy Conservation Bonds (QECBs) are for investment in capital projects that improve energy conservation. Qualified School Construction Bonds (QSCBs) are for school construction, Build America Bonds (BABs) are for any governmental purpose, and Recovery Zone Economic Development Bonds (RZEDBs) are for economic development purposes.[2] **Table 1** summarizes the acronyms for the bonds examined in this report.

[1] For ease of exposition, the phrase "state and local tax-exempt bonds" is replaced by "municipal bonds" for the remainder of the report.

[2] For issuers choosing the direct payment option, the BABs must be used for capital expenditures. See below for more information on the difference between investor credit and issuer direct payment TCBs.

Table 1. Tax Credit Bond Acronyms

Acronym	Type of Bond
BABs	Build America Bonds
CREBs	Clean Renewable Energy Bonds
GTCBs	Gulf Tax Credit Bonds
MWDBs	Midwestern Disaster Bonds
QECBs	Qualified Energy Conservation Bonds
QFCBs	Qualified Forestry Conservation Bonds
QSCBs	Qualified School Construction Bonds
QZABs	Qualified Zone Academy Bonds
RZEDBs	Recovery Zone Economic Development Bonds
TCBs	Tax Credit Bonds

The Mechanics of TCBs

TCBs offer a tax credit that may be used to directly reduce federal income tax liability. The credit available from a TCB depends on the bond principal and credit rate. The method of determining the credit rate differs across types of TCBs: the credit rate for investor and issuer credit TCBs depends on a national credit rate set by Treasury, while the credit rate for direct payment TCBs is dependent on interest rate negotiations between the issuer and investor. Unlike interest on municipal bonds, which does not create a taxable income stream, the credit amount is included in the bond holder's gross income.[3] The credit is limited to the bondholder's current tax liability and is therefore "non-refundable." Unused tax credits may be carried over to the succeeding tax year.

Investor Credit TCBs

The credit rate for investor and issuer credit TCBs is dependent on a national credit rate set by the Secretary of the Treasury. That national credit rate is intended to allow issuers of TCBs to sell their bonds at par (face value) without additional interest expense. The rate calculation is

> based on its [the Treasury Department's] estimate of the yields on outstanding bonds from market sectors selected by the Treasury Department in its discretion that have an investment grade rating between A and BBB for bonds of a similar maturity for the business day immediately preceding the sale date of the tax credit bonds.[4]

The credit rate published (by the U.S. Bureau of the Fiscal Service) on the issue sale date is the bondholder's annual rate of credit.

The relationship between the national credit rate set by Treasury and final credit rate applied to a bond issue is dictated by the federal tax code, and differs across types of investor and issuer TCBs. The credit on what are known as 100% credit TCBs provides for a benefit equal to the product of the national credit rate and the bond principal. For example, the annual tax credit rate

[3] In special cases, some insurance companies may indirectly pay income tax on otherwise tax exempt debt. In addition, interest paid on private activity bonds may be subject to the alternative minimum tax.

[4] U.S. Department of the Treasury, Internal Revenue Service, Internal Revenue Bulletin 2009-6, February 9, 2009, p. 449.

for investor credit TCBs was 3.92% on September 8, 2016 (the term was 45 years).[5] The bonds sold on that day would allow the taxpayer to claim a federal tax credit equal to 3.92% multiplied by the face value of the bond. Thus, a $100,000 bond issued on September 8, 2016, would yield an annual tax credit of $3,920 for the bondholder.

However, other credit rates may be reduced for some TCBs. CREBs and QECBs allow for a credit equal to 70% of the national credit rate. Thus, for these bonds, the investor receives 70% of the annual tax credit described above, or $2,744 (70% of $3,920).[6] The method for determining the tax credit rate for investor tax credit TCBs is generally the same for 100% and 70% credit TCBs.[7]

Issuer Direct Payment TCBs

Unlike investor credit TCBs, the benefit claimed for issuer direct payment TCBs depends on the interest rate established between the buyer and issuer of the bond, not the Secretary of the Treasury. The issuer and investor agree on terms either as a result of a competitive bid process or through a negotiated sale. As with investor credit TCBs, the relationship of the final credit rate and the negotiated interest rate may differ across types of TCBs.[8] BAB and RZEDB credits are 35% and 45%, respectively, of a market-determined taxable bond interest rate for the specific issuer, not the Secretary of Treasury.

For example, if the negotiated taxable interest rate is 8%, on $100,000 of bond principal, then a bond with 35% credit amount would produce a credit worth $2,800 (8% times $100,000 times 35%). The issuer has the option of receiving a direct payment from the Treasury equal to the credit amount or allowing the investor to claim the credit. The issuer would choose the direct payment option if the net interest cost was less than traditional tax-exempt debt of like terms. The interest cost to the issuer choosing the direct payment is $8,000 less the $2,800, or $5,200. If the tax-exempt rate of the bond is greater than 5.20% (requiring a payment of greater than $5,200), then the direct payment is a better option for the issuer.[9]

So long as the marginal tax rate of investors in the municipal bond market is lower than the credit rate of the direct payment TCB, then municipal issuers would likely chose the direct payment option. However, as the marginal tax rate rises, the alternative to direct payment TCBs, traditional tax-exempt bonds, is relatively more attractive to issuers and investors alike.[10] Increases in statutory marginal tax rates would likely induce such an outcome, reducing the attractiveness of direct payment TCBs relative to traditional tax-exempt bonds.

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[5] Unlike other TCBs, CREBs have a range of possible maturities (term), but have the same credit rate as the other TCBs of like term. The annual tax credit rate for TCBs is available on the following U.S. Treasury website: https://www.treasurydirect.gov/GA-SL/SLGS/selectQTCDate.htm.

[6] TCBs are not restricted to the 100% or 70% credit rate values under current law, as benefits would rise with the credit rate provided.

[7] See 26 U.S.C. 54A(b).

[8] For example, BAB credits are worth 35% of the product of interest rate and bond principal.

[9] Note that if the credit is claimed by the issuer, the transfer to the issuer is an outlay of the federal government, not a tax credit. This simple example does not consider issuance and underwriter fees.

[10] Researchers have determined that the federal government subsidy for BABs "… disadvantages individual U.S. taxpayers, who are the main holders of municipal bonds, and benefits new entrants in the municipal bond market." New entrants would include international investors and pension funds. See Andrew Ang, Vineer Bhansali, and Yuhan Xing, *Build America Bonds*, National Bureau of Economic Research, Working Paper no. 16008, May 2010.

The direct payment TCB, in cases where the issuer claims the direct payment, is modeled after the "taxable bond option," which was first considered in the late 1960s. In 1976, the following was posited by the then president of the Federal Reserve Bank in Boston, Frank E. Morris:

> The taxable bond option is a tool to improve the efficiency of our financial markets and, at the same time, to reduce substantially the element of inequity in our income tax system which stems from tax exemption [on municipal bonds]. It will reduce the interest costs on municipal borrowings, but the benefits will accrue proportionally as much to cities with strong credit ratings as to those with serious financial problems.[11]

The taxable bond option has been well received by issuers and investors. A U.S. Department of the Treasury report on BABs, a direct payment TCB, estimated that over the lifetime of the program over $181 billion in BABs were issued.[12]

The implementation of annual sequesters, as provided for by the Budget Control Act of 2011 (P.L. 112-25), diminished the credit rates of certain issuer direct payment TCBs. In FY2016, sequestration reduced the credit rates for issuer direct payment BABs, QSCBs, QZABs, new CREBs, and QECBs by 6.8%.

Tax Credit Bond Stripping

The credits on TCBs are "strippable," or separable from the underlying bond.[13] Allowing the separation of the credit from the underlying bond improves the attractiveness and marketability of the TCBs to issuers, investors, and financial intermediaries. Generally, a financial intermediary could buy the TCB, sell the principal to an investor looking for a longer-term investment, and sell the stream of credits to another investor seeking quarterly income. For example, assume a financial intermediary buys the $100,000 TCB presented above. The intermediary sells the right to the principal portion (the $100,000) of the TCB to a pension fund for $90,000 and sells the stream of credits ($1,980 every quarter for 15 years) to another investor for $90,000. The stripping provision makes TCBs more competitive with traditional bonds.[14]

The Term of TCBs

The maximum term (the number of years for which the credit will be paid) "shall be the term which the Secretary estimates will result in the present value of the obligation to repay the principal on the bond being equal to 50% of the face amount of the bond."[15]

Specifically, the maximum term of the bonds is determined by the prevailing interest rate for municipal debt with a maturity of greater than 10 years. The maximum term on TCBs issued on September 8, 2016, was set at 45 years. Midwest Disaster Bonds (MWDBs) had a maximum term of two years, and the interest rate reflected the shorter term. The Treasury publishes the credit rate and term daily.[16]

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[11] Frank E. Morris, "The Taxable Bond Option," *National Tax Journal*, vol. 29, no. 3 (September 1976), p. 356.

[12] U.S. Department of the Treasury, "Treasury Analysis of Build America Bonds Issuance and Savings," May16, 2011.

[13] 26 U.S.C. 54A(i).

[14] For rules on TCB stripping, see the following IRS Notice 2010-28 from Internal Revenue Bulletin 2010-15, April 12, 2010; available at http://www.irs.gov/irb/2010-15_IRB/ar08.html.

[15] 26 U.S.C. 54A(d)(5)(B). The term of TCBs is represented by the expression $log(2)/log\ (1+r)$, where the variable r is the "discount rate of the average annual interest rate of tax-exempt obligations having a term of 10 years or more which are issued during the month."

[16] As reported on the U.S. Treasury website, at https://www.treasurydirect.gov/GA-SL/SLGS/selectQTCDate.htm.

Application of Davis-Bacon Labor Standards

ARRA included a provision that requires some of the TCBs to abide by the labor standards as mandated under the Davis-Bacon Act of 1931. Generally, Davis-Bacon requires that contractors pay workers not less than the locally prevailing wage for comparable work. The following bonds are subject to the Davis-Bacon labor standard: new CREBs, QECBs, QZABs, QSCBs, and RZEDBs.

Tax Credit Bonds vs. Other Bonds

The Treasury-determined credit rate for investor credit TCBs is set higher than the municipal bond rate to compensate for the credit's taxability noted earlier. Generally, to attract investors, the credit rate should yield a return greater than the prevailing municipal bond rate and at least equal to the after-tax rate for corporate bonds of similar maturity and risk. And for issuers, the interest cost should be less than, or at least equal to, the next best financing alternative. In almost all cases, tax-exempt bonds would be the next best alternative for governmental issuers. The following section offers a brief analysis of the tradeoff between tax credit bonds and other bonds from the prospective of investors and issuers.

Appeal to Investors

An investor's marginal tax rate is critical in determining the attractiveness of bond investments. Consider the following example where we assume an average 4.53% interest rate on municipal debt. Investors in the 15% income tax bracket would need a credit rate of at least 5.33% (4.53% divided by (1 - 0.15)) to choose TCBs over municipal bonds. Investors in the 35% bracket would require a credit rate on TCBs of 6.97% (4.53% divided by (1 - 0.35)). Generally, the TCB credit rate would have to exceed the after-tax return on municipal bonds and the after-tax return on taxable bonds of like term to maturity. The investor credit TCB rate is set at the higher amount to ensure the market for the bonds clears.

Evaluating an Investor Tax Credit Bond Investment

Bondholders in the highest tax bracket find the tax credit relatively less attractive than do bondholders in the lower brackets. However, the tax credit is fixed at the same rate for all buyers. For TCBs that offer a reduced credit rate, such as CREBs and QECBs, the issuer would augment the tax credit with an interest payment or discount pricing.

t = income tax rate of bond holder

r^{TCB} = pre-tax rate of TCB credit

r^{muni} = prevailing interest rate on high grade tax-exempt municipal bonds

r^{tax} = prevailing interest rate on high grade taxable bonds

Purchase a TCB if:

$$r^{TCB} > r^{muni}/(1-t)$$

or

$$r^{TCB} > r^{tax}$$

To attract investors, the TCB tax credit rate must be greater than (a) alternative tax-exempt municipal bond interest rate divided by one minus the income tax rate, or (b) the prevailing taxable bond rate.

The choice between a tax credit bond and a taxable corporate bond is not as dependent upon the bondholder's tax bracket. At comparable levels of default risk, TCBs and taxable bonds are

equally attractive to purchasers that anticipate tax liability. However, an investor without tax liability that holds a tax credit bond would be allowed to claim a credit for future tax liability or carry forward the credit. For these investors, "stripping" the tax credits from the bond and selling them to an entity with tax liability would be an option.

Appeal to Issuers

The objective of issuers is to borrow at the lowest possible interest cost. TCBs under both the investor credit model and the issuer credit model are typically lower cost than the next best alternative, tax-exempt bonds. Proposals to reduce the issuer credit rate, to 25% or 28% for example, increase the likelihood that issuers will opt for traditional tax-exempt bond finance. Direct payment TCBs provide issuers with the option of receiving payments directly from Treasury as another option to tax-exempt bonds. The relative value of direct payment TCBs increases with the interest rate of the alternative tax-exempt bond, as that rate determines the payment otherwise required from the issuer.

TCB issuers may also establish a bond reserve fund (or sinking fund). A sinking fund provides for the eventual repayment of bond principal by devoting certain funds to regular payments on the bond issue. Generally, IRS rules allow reserve funds to accumulate just enough to repay the bond principal.[17] The sinking fund provision for TCBs significantly reduces the interest cost to the issuer. On September 8, 2016, the allowable rate for the "Permitted Sinking Fund Yield" to repay the issue was 1.55%.[18] The TCB rate was 3.92% on that day.

Influence of Economic Conditions

The relative appeal of tax-exempt bonds and TCBs to investors and policymakers may vary significantly with underlying economic patterns. In normal economic conditions, tax-exempt bonds are offered at a lower interest rate than those of corporate bonds. For example, on September 2, 2016, the average high-grade taxable corporate bond rate was 3.24%, and the average high-grade municipal bond rate was 2.84% (see **Figure 1**).[19] The municipal bond rate thus offers a considerable subsidy to the issuer, as without the tax exemption the issuer would have had to pay 40 basis points more for each dollar borrowed (3.24% is 0.40 percentage points greater than 2.84%).

However, from late 2008 to early 2009 and from early 2011 to early 2015, the gap between the interest rates of municipal and corporate bonds was much lower than its historical average, and in some cases the municipal bond rates were actually higher than the taxable high-grade corporate bond rates. Turmoil in the financial markets brought about by the Great Recession may have contributed to the increase in municipal bond rates. Another contributor to the high yields on municipal bonds may have been low demand for those bonds due to concerns about potential and actual defaults by municipalities like Chicago, Detroit, and Puerto Rico.[20]

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[17] The U.S. Treasury publishes a maximum yield for these reserve funds along with the credit rate. The permitted sinking fund yield is equal to 110% of the long-term adjusted applicable federal rate (AFR), compounded semiannually. The permitted sinking fund yield is updated monthly, 26 U.S.C. 54A(d)(4)(C).

[18] As reported on the U.S. Treasury website, at https://www.treasurydirect.gov/GA-SL/SLGS/selectQTCDate.htm.

[19] Federal Reserve Board, Table H. 15, "Selected Interest Rates," at http://www.federalreserve.gov/releases/H15/data.htm#top.

[20] Jeff Benjamin, "Muni Bonds are Poised to Shine as Rates Move Higher," *Investment News*, August 12, 2015. For more information on the financial issues concerning Puerto Rico, see CRS Report R44095, *Puerto Rico's Current Fiscal Challenges*, by D. Andrew Austin.

Beginning in 2015, the spread between corporate and municipal bonds returned near its historical average. This return to normal may be due to anticipated interest rate increases by the Federal Reserve, as municipal bonds are anticipated to perform better as interest rates increase.[21] However, the recent fluctuations in the rate spread make it difficult to predict the nature of the spread moving forward.

Figure 1. Interest Rates for Municipal, 10-Year Treasury, and Corporate Bonds

Weekly averages from January 4, 2007 to September 1, 2016

Source: Federal Reserve Board, Table H.15, "Selected Interest Rates," available at http://www.federalreserve.gov/releases/h15/data.htm.

Notes: The municipal bond rate data correspond to the dates listed. The Treasury and corporate bond data are the weekly average as of the day after that listed on the graph.

The value of the TCB credit is a function of both the interest rate of the bond and the credit rate on the TCB as set by Treasury. However, because the credit rate of the TCB is intended to be such that the bonds are not sold at a discount, the relative value of TCBs to corporate bonds is less dependent on general economic conditions than is the value of municipal bonds over corporate bonds. Therefore, TCBs may be relatively more attractive compared to municipal bonds in economic periods of low growth or great uncertainty.

[21] Ibid.

Allocation and Purpose of Tax Credit Bonds

The authority to issue TCBs is usually capped with a national limit or with a state-by-state cap. BABs were the exception. In addition, some of the TCBs include set asides for sub-state governments or other entities. What follows is a brief overview of how and to whom each bond program allocates the authority to issue the bonds.

Table 2 lists the existing TCBs and their authorization levels. A more detailed description of each type of bond is provided later in the report. Note that P.L. 110-246, enacted in June of 2008, created Section 54A of the tax code. This section contains many parameters common to all TCBs. This revision of the tax code was intended to "standardize" some of the TCB parameters.

Table 2. Authorization Levels of Tax Credit Bonds

Code Section	Bond Program	Authorized Amount	Credit Amount	Expired After	Enacting Legislation
Energy					
54	CREBs I	$1,200,000,000	100%	2009	P.L. 109-58
54C	New CREBs I	800,000,000	70%	2010	P.L. 110-343
54C	New CREBs II	1,600,000,000	70%	2010[a]	P.L. 111-5
54D	QECBs I	800,000,000	70%	no expiration	P.L. 110-343
54D	QECBs II	2,400,000,000	70%	no expiration	P.L. 111-5
General Government, Economic Development, and Forest Conservation					
54B	QFCBs	500,000,000	100%	2010	P.L. 110-246[b]
54AA	BABs	no limit	35%[c]	2010	P.L. 111-5
1400N(1)	GTCBs	350,000,000	100%	2006	P.L. 109-135
1400N(l)	MWDBs	450,000,000	100%	2009	P.L. 110-343
1400U-2	RZEDBs	10,000,000,000	45%[d]	2010	P.L. 111-5
School Construction					
54E	QZABs I	4,400,000,000	100%	2008	P.L. 105-34
54E	QZABs II	5,200,000,000	100%	2016	P.L. 111-5
54F	QSCBs[e]	22,400,000,000	100%	2010	P.L. 111-5

Source: CRS compilation.

a. IRS Notice 2015-12 solicited additional applications for new CREBs in 2015 to claim forfeited amounts previously allocated.

b. P.L. 110-246 is the 2008 "Farm Bill" which was originally signed by the President as P.L. 110-234 on May 22, 2008. Clerical errors in P.L. 110-234 required Congress to pass the revised "Farm Bill" enacted on June 18, 2008. P.L. 110-246 repealed P.L. 110-234.

c. The underlying tax credit rate is market determined, not established by the Secretary of the Treasury as with the other TCBs. The credit is 35% of the market-determined interest rate.

d. The credit amount is determined in the same manner as BABs.

e. QSCBs could be issued in 2011 if capacity were carried over from 2010.

As **Table 2** shows, the American Recovery and Reinvestment Act of 2009 (P.L. 111-5, ARRA) included several bond provisions that use a tax credit mechanism. Specifically, ARRA created QSCBs. It also allowed issuers the option of receiving a direct payment from the U.S. Treasury instead of tax-exempt interest payments or tax credits for investors. These new bonds, BABs and RZEDBs, are also unlike other tax credit bonds in that the interest rate on the bonds is a rate agreed to by the issuer and bond investor. In short, with BABs and RZEDBs, the two parties in the transaction established the tax credit rate, not the Treasury Secretary. The resulting investor tax credit amount or issuer direct payment is equal to 35% of the interest payment for BABs and 45% for RZEDBs.[22]

Legislation has been introduced in the 114th Congress that would modify the status of certain TCBs. This activity includes H.R. 2676 and S. 1515, which would reauthorize and extend the issuance of BABs. Moreover, QZABs were extended for the 2015 and 2016 tax year with $400 million of capacity each year by the Consolidated Appropriations Act, 2016 (P.L. 114-113). Other recent TCB legislative action was taken in the Hiring Incentives to Restore Employment Act of 2010 (HIRE Act; P.L. 111-147), which expanded the direct payment option beyond BABs to include issuers of new CREBs, QECBs, QZABs, and QSCBs.

Qualified Zone Academy Bonds

The aggregate limit for QZAB debt was $400 million annually from 1998 through 2008, $1.4 billion for each of 2009 and 2010, and $400 million annually from 2011 through 2016.[23] The Consolidated Appropriations Act, 2016 (P.L. 114-113) authorized an additional $400 million dollars in QZABs for both 2015 and 2016. Further limits are applied to each state, the District of Columbia, and territory based upon their portion of the U.S. population below the poverty line. States are responsible for the allocation of the available credit to the local governments or qualified zone academies. Unused credit capacity can be carried forward for up to two years.

Individual public schools use QZABs, through their participating state and local governments, for school renovation (not including new construction), equipment, teacher training, and course materials. To qualify for the program, the school must also be a "Qualified Zone Academy." A "Qualified Zone Academy" is any public school (or program within a public school) that provides and develops educational programs below the postsecondary level if "such public school or program (as the case may be) is designed in cooperation with business to enhance the academic curriculum, increase graduation and employment rates, and prepare students for the rigors of college and the increasingly complex workforce."[24]

In addition, the academy must also be located in an empowerment zone or enterprise community. Alternatively, the academy also qualifies if it is reasonably expected that at least 35% of the students qualify for the free or reduced price school lunch program. At least 95% of the bond proceeds must be used for rehabilitating or repairing public school facilities, providing equipment, developing course materials, or training teachers and other school personnel.

Qualified School Construction Bonds

These bonds had a national limit of $11 billion in each of 2009 and 2010. An additional $200 million in each of 2009 and 2010 was allocated to Indian schools. The bonds generally are

[22] BABs and RZEDBs where the issuer chooses the direct payment option do not allow for the investor tax credit.

[23] According to IRS Notice 2009-30, the $1.4 billion is for each of 2009 and 2010.

[24] 26 U.S.C. 54E(d)(1)(A). The private entity must donate an amount equivalent to 10% of the bond proceeds. Services of employees as volunteer mentors satisfies the 10% private partnership requirement.

allocated to states based on the state's share of Title 1 Basic Grants (Section 1124 of the Elementary and Secondary Education Act of 1965; 20 U.S.C. 6333, BG). The District of Columbia and the possessions of the U.S. are considered states for QSCBs. The possessions other than Puerto Rico (American Samoa, Commonwealth of the Northern Mariana Islands, Guam, and U.S. Virgin Islands), however, were allocated an amount on the basis of the possession's population with income below the poverty line as a portion of the entire U.S. population with income below the poverty line.

As noted above, 40% of the bond volume ($4.4 billion) is dedicated to large LEAs. A "large" LEA is defined as one of the 100 largest based on the number of "children aged 5 through 17 from families living below the poverty level." Also, one of not more than an additional 25 LEAs can be chosen by the Secretary if the LEA is "in particular need of assistance, based on a low level of resources for school construction, high level of enrollment growth, or such other factors as the Secretary deems appropriate."[25]

Each large LEA, as defined above, would receive an allocation based on the LEA's share of the total Title I basic grants directed to large LEAs. The state allocation is reduced by the amount dedicated to any large LEAs in the state.

States are currently authorized to issue $5.2 billion of QZABs and were authorized to issue $22 billion of QSCBs. QZAB allocations will be made through 2016 and may be carried forward up to two years. QSCB allocations were made through 2010 but can be carried forward indefinitely. On September 8, 2016, the credit rate on QZABs and QSCBs was 3.92% and the term 45 years. As noted earlier, issuers of QZABs and QSCBs could have chosen the direct payment option before 2011.

Two bills were introduced in the 113th Congress to extend QSCBs, H.R. 1629 and S. 1523. As of this writing, no bills have been introduced in the 114th Congress to extend this provision.

Clean Renewable Energy Bonds[26]

As authorized by P.L. 109-58, the original CREBs, which could have been issued through 2009, had a national limit of $1.2 billion of which a maximum of $750 million can be granted to governmental bodies. In addition to governmental bodies, cooperative electric companies and a "clean renewable energy bond lender" can issue the bonds. A clean renewable energy bond lender is defined in the tax code as "a lender which is a cooperative which is owned by, or has outstanding loans to, 100 or more electric companies and is in existence on February 1, 2002, and shall include any affiliated entity which is controlled by such lender."[27]

The CREB lender would lend to co-ops or governmental bodies. The Secretary of the Treasury reviews applications and selects projects "as the Secretary deems appropriate."[28] Thus, CREBs are not allocated by formula and there are no state minimums. The Internal Revenue Service, through IRS Notice 2005-98, described the allocation strategy of the Secretary.[29] The smallest

[25] 26 U.S.C. 54F(d)(2)(E)(ii). The Secretary did not exercise this option for 2009.

[26] For more on CREBs, see CRS Report R41573, *Tax-Favored Financing for Renewable Energy Resources and Energy Efficiency*, by Molly F. Sherlock and Steven Maguire.

[27] 26 U.S.C. 54(j)(2).

[28] 26 U.S.C. 54(f)(2).

[29] U.S. Department of Treasury, Internal Revenue Service, Internal Revenue Bulletin 2005-52, December 27, 2005, p. 1213.

dollar amount projects are considered first and the allocations continue for ever larger dollar amount projects until the entire allocation is consumed.

The term and credit rate for CREBs were determined in the same manner as the other TCBs. These original CREBs offered a 100% credit.

CREBs are available to finance qualified energy production projects which include (1) wind facilities, (2) closed-loop bio-mass facilities, (3) open-loop bio-mass facilities, (4) geothermal or solar energy facilities, (5) small irrigation power facilities, (6) landfill gas facilities, (7) trash combustion facilities, (8) refined coal production facilities, and (9) certain hydropower facilities.

New Clean Renewable Energy Bonds

As originally authorized in P.L. 110-343, the *new* CREBs had a national limit of $2.4 billion to be issued before December 31, 2009.[30] In contrast to the original CREBs, as noted in **Table 2**, the credit rate on new CREBs is 70% of the credit rate offered on the original CREBs. Not more than one-third of new CREBs were allocated to any of the following: (1) public power providers, (2) governmental bodies, or (3) projects of cooperative electric companies. For public power providers, the Secretary determines the qualified projects which "are appropriate for receiving an allocation." Each will receive a share of the allocation based on the ratio of the projected cost of the project relative to all other qualified projects receiving an allocation.[31] Governmental bodies and co-ops receive an allocation in an amount the "Secretary determines appropriate."[32] As with original CREBs, there is not a state-by-state minimum or formula allocation mechanism. As noted earlier, issuers of new CREBs can choose the direct payment option.

Qualified Energy Conservation Bonds

QECBs were first created under P.L. 110-343 with a national limit of $800 million.[33] The program was expanded with an additional $2.4 billion under P.L. 111-5 for a total available authority of $3.2 billion. Similar to the new CREBs, these tax credit bonds offer a credit rate that is 70% of the credit rate offered on old CREBs and other TCBs. Though the authority to allocate QECBs does not expire, the QECB program is now fully subscribed.

QECBs were allocated to states based on the state's share of total U.S. population. The District of Columbia and the possessions of the U.S. are considered states for QECBs. Large local governments, defined as any municipality or county with population of greater than 100,000, are eligible for a direct allocation. Counties that contain a large city can be eligible if its population less the large city population is still greater than 100,000.

These bonds are to be used for capital expenditures for the purposes of (1) reducing energy consumption in publicly owned buildings by at least 20%; (2) implementing green community programs; (3) rural development involving the production of electricity from renewable energy resources; or (4) programs listed above for CREBs. Also included are expenditures on research facilities and research grants, to support research in (1) development of cellulosic ethanol or other nonfossil fuels; (2) technologies for the capture and sequestration of carbon dioxide produced through the use of fossil fuels; (3) increasing the efficiency of existing technologies for producing

[30] IRS Notice 2015-12 solicited additional applications for new CREBs in 2015 to claim forfeited amounts previously allocated.

[31] 26 U.S.C. 54C(c)(3)(A).

[32] 26 U.S.C. 54C(c)(3)(B).

[33] For more on QECBs, see CRS Report R41573, *Tax-Favored Financing for Renewable Energy Resources and Energy Efficiency*, by Molly F. Sherlock and Steven Maguire.

nonfossil fuels; (4) automobile battery technologies and other technologies to reduce fossil fuel consumption in transportation; and (5) technologies to reduce energy use in buildings. Energy saving mass commuting facilities and demonstration projects are also included in the list of qualified purposes.

As noted earlier, issuers of QECBs could have chosen the direct payment option on debt issued through 2011.

Forestry Conservation Bonds

QFCBs were limited to $500 million to be allocated before May 22, 2010 (24 months after enactment of P.L. 110-246), in a manner "as the Secretary determines appropriate."[34] Once the bonds are issued, the proceeds must be spent within three years. A unique feature of QFCBs is the allowance for an allocation amount to be used to offset any taxes due the federal government. Any allocation amount used to settle outstanding federal tax debts cannot be used for bond issuance. A qualified issuer is a "State or any political subdivision or instrumentality thereof or a 501(c)(3) organization."[35]

For purposes of the QFCB program, a qualified forestry conservation purpose must meet the following criteria:[36]

> (1) Some portion of the land acquired must be adjacent to United States Forest Service Land.
>
> (2) At least half of the land acquired must be transferred to the United States Forest Service at no net cost to the United States and not more than half of the land acquired may either remain with or be conveyed to a State.
>
> (3) All of the land must be subject to a native fish habitat conservation plan approved by the United States Fish and Wildlife Service.
>
> (4) The amount of acreage acquired must be at least 40,000 acres.

Gulf Tax Credit Bonds

GTCBs were bonds distributed to areas affected by Hurricane Katrina, which made landfall in late August 2005. A total of $350 million was available to be issued through GTCBs, with up to $200 million available to be issued by the state of Louisiana, up to $100 million available to be issued by the state of Mississippi, and up to $50 million available to be issued by the state of Alabama. The maturity length of GTCBs was much shorter than that of many other TCBs, with a maximum allowable term of two years. GTCB credits were eligible to be claimed against regular income tax liability and alternative minimum tax liability.

GTCBs were designed to assist state and local governments that were burdened with additional fiscal stress. The bonds were largely designed to help with fiscal responsibilities that pre-dated the arrival of Hurricane Katrina, as 95% of GTCB proceeds were required to be used to make bond payments (other than private activity bonds) that were outstanding as of August 28, 2005. GTCBs could be used to pay principal, interest, or premia on state or local outstanding bonds. Eligibility to authorize GTCBs expired at the end of 2006.

[34] 26 U.S.C. 54B(d)(1).

[35] 26 U.S.C. 54B(f).

[36] 26 U.S.C. 54B(e).

Midwest Disaster Bonds

MWDBs were designated for areas impacted by the severe storms and flooding in the Midwest that occurred between May 1, 2008, and August 1, 2008. Each affected area could have issued an amount based on the population of the affected area. States with over 2 million affected residents were authorized to issue up to $100 million and those with less than 2 million and more than 1 million could have issued $50 million. States with an affected population under 1 million were not eligible to issue MWDBs. Based on IRS guidance, Illinois, Missouri, and Nebraska could have issued up to $50 million each. Indiana, Iowa, and Wisconsin could have issued up to $100 million.[37] These bonds were issued in calendar year 2009 only and as with GTCBs, had a maximum term of two years. The credit rate on the bonds reflected the relatively short term of the bonds.

The bonds were intended for states to use to help those sub-state jurisdictions which were under fiscal stress. Specifically, the proceeds from MWDBs were to be used to pay the principal and interest on any outstanding state bonds or the bonds of any affected political subdivision within the state. The proceeds could also have been loaned to a jurisdiction for the same purpose. The provision required the issuer to issue an equal amount of general obligations for the same purpose, akin to a matching requirement.

Build America Bonds

Unlike other TCBs, BABs were not targeted in their designation. The volume of BABs was not limited and the purpose was constrained only by the requirement that "the interest on such obligation would (but for this section) be excludible from gross income under section 103."[38] Thus, BABs could have been issued for any purpose that would have been eligible for traditional tax-exempt bond financing other than private activity bonds. The bonds must have been issued before January 1, 2011.

BABs are a direct payment TCB, and offer a credit amount equal to 35% of the interest rate established by the buyer and issuer of the bond.

In the 114th Congress, similar legislation has been introduced in the House and Senate to reinstate and permanently extend BABs. H.R. 2676 and S. 1515 would permanently extend issuance authority for BABs, and implement a decreasing schedule for the applicable credit rate. The credit rate would decrease from 35% for bonds issued in 2009 or 2010 to 28% for bonds issued in 2019 or later.

A U.S. Department of the Treasury report on BABs estimated that through December of 2010, the bonds had saved municipal issuers roughly $20 billion in interest costs.[39]

Recovery Zone Economic Development Bonds

RZEDBs are a special type of BAB. Instead of the 35% credit, RZEDBs offered a 45% credit and are targeted to economically distressed areas. Specifically, these bonds are for any area designated by the issuer (1) as having significant poverty, unemployment, rate of home foreclosures, or general distress; (2) economically distressed by reason of the closure or realignment of a military

[37] Internal Revenue Service, Internal Revenue Bulletin 2008-50, Notice 2008-109, p. 1285.

[38] 26 U.S.C. 54AA(d)(1)(A). BAB proceeds that use the direct payment options are to be used only for capital expenditures.

[39] U.S. Department of the Treasury, "Treasury Analysis of Build America Bonds Issuance and Savings," May 16, 2011.

installation pursuant to the Defense Base Closure and Realignment Act of 1990; or is (3) an empowerment zone or renewal community.[40] The purpose of the bonds is, as the name implies, economic development. Specifically, the bonds are to be used for "(1) capital expenditures paid or incurred with respect to property located in such zone [recovery zone], (2) expenditures for public infrastructure and construction of public facilities, and (3) expenditures for job training and educational programs."[41]

The volume limit for RZEDBs is $10 billion and was allocated to states (including DC and the possessions) based on their employment declines in 2008. All states that experienced an employment decline in 2008 receive an allocation that bares the same ratio as the state's share of the total employment decline in those states. However, all states and U.S. territories, regardless of employment changes, are guaranteed a minimum of 0.90% of the $10 billion.

Large municipalities and counties are also guaranteed a share of the state allocations based on the jurisdiction's share of the aggregate employment decline in the state. A large jurisdiction is defined as one with a population of greater than 100,000. For counties with large municipalities receiving an allocation, the county population is reduced by the municipal population for purposes of the 100,000 threshold. Authority to issue RZEDBs expired January 1, 2011.

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[40] 26 U.S.C. 1400U-1(b).

[41] 26 U.S.C. 1400U-2(c).