



July 18, 2012

Qualified Energy Conservation Bond (QECB) Update: New Guidance from the U.S. Department of Treasury and the Internal Revenue Service

Qualified Energy Conservation Bonds (QECBs) are federally-subsidized bonds that enable state, tribal, and local government issuers to borrow money to fund a range of energy conservation projects at very attractive borrowing rates over long contract terms. In June 2012, the U.S. Department of the Treasury (Treasury) and the Internal Revenue Service (IRS) published a notice to clarify what constitutes a qualified project for potential issuers of the approximately \$2.5 billion of remaining QECB issuance capacity. The guidance addresses two qualified uses of QECB proceeds—how issuers should measure energy use reductions in publicly-owned buildings and what constitutes a green community program.

QECB Basics

A QECB is a bond that enables qualified state, tribal and local government issuers to borrow money at attractive rates to fund qualified energy conservation projects.¹ QECBs were initially established by the Energy Improvement and Extension Act of 2008 and issuance capacity was expanded from \$800 million to \$3.2 billion by the American Recovery and Reinvestment Act of 2009. It is estimated that approximately 20 percent of this issuance capacity has been used, leaving approximately \$2.5 billion available to state, local, and tribal governments.² A QECB is among the lowest-cost public financing tools available because the Treasury subsidizes the issuer's borrowing costs. Issuers may choose between structuring QECBs as tax credit bonds (i.e., bond investors receive federal tax credits in lieu of—or in addition to—interest payments) or as direct subsidy bonds (i.e., bond issuers receive cash rebates from the Treasury to subsidize their interest payments). Both tax credit and direct payment bonds subsidize borrowing costs; thus far, most QECBs have been issued as direct subsidy bonds, due to lack of investor appetite for tax credit bonds.

This paper is part of the LBNL Clean Energy Financing Policy Brief series. These working papers highlight emerging financing models, important issues that financing programs face, and how these issues are being addressed. To join the email list to receive these policy briefs, please click [HERE](#). The work described in this Policy Brief was funded by the Department of Energy Office of Energy Efficiency and Renewable Energy, Weatherization and Intergovernmental Program under Contract No. DE-AC02-05CH11231. Please direct questions or comments to Mark Zimring (mzimring@lbl.gov). The information in this policy brief is for informational purposes only—potential issuers should consult the U.S. Department of Treasury's QECB guidance and their bond counsels.

¹A full list of eligible projects available here: <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/QECB.html>

²Overview of QECB issuances available here: http://www.energyprograms.org/wp-content/uploads/2012/03/QECB_Memo_6-8-2.pdf

Compliance Uncertainty a Barrier to Broader QECB Deployment

Federal legislators intended that state, tribal, and local governments be given wide discretion in methods to conserve energy that may be financed with QECBs:

The [U.S. House of Representatives conference] committee [for the Energy Improvement and Extension Act of 2008] believes that local officials should have the flexibility to develop their own approaches to energy conservation. Therefore, the Committee believes that it is appropriate to empower State and local governments by providing them with access to subsidized financing to help promote energy-efficient policies tailored to the needs of local communities.³

Despite the legislative intent that QECB rules be interpreted broadly, the lack of specificity in the previously issued Federal guidance has led to uncertainty among potential issuers about whether specific projects comply with QECB regulations and are thus eligible for the Federal interest rate subsidy or tax credit. This uncertainty has been one of the major challenges to more widespread QECB deployment. To reduce this uncertainty, the Treasury and the IRS published additional guidance in June 2012 (2012 Guidance) that provides details on how issuers can comply with QECB regulations for two popular qualified conservation purposes: reducing energy use in public buildings by at least 20 percent and implementing green community programs.

Reducing Energy Use in Publicly-Owned Buildings

QECBs can be used to fund energy conservation projects that reduce energy use in public buildings by at least 20 percent (the 20 percent test).⁴ The updated 2012 Guidance provides clarity on key issues about how energy savings should be measured and options for meeting the 20% savings target (e.g., either for individual facilities or major end uses or over a portfolio of facilities).

- **Expected project energy savings can be determined using a “reasonable expectation standard” and do not necessitate ongoing energy use monitoring.⁵**

QECB issuers may now confidently rely on several methodologies for estimating that expected public building energy savings from QECB-funded capital expenditures will meet the 20 percent test threshold:

1. Issuers may rely on an independent, licensed professional engineer or other expert to certify the expectation of savings.⁶
2. Issuers may use energy savings estimation tools including an American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Level III audit,⁷ or simulation

³ Source: House Report No. 110-658 that accompanied H.R. 6049 (Energy Improvement and Extension Act of 2008).

⁴ Technically, QECBs can only be used to fund **capital expenditures** that reduce energy use in public buildings by at least 20 percent. The 2012 guidance clarifies that a “capital expenditure” is any cost of a type that is properly chargeable to capital account (e.g. administrative costs do not qualify—although there is an allowance for issuance costs up to two percent of bond size).

⁵ While there is no requirement of subsequent measurement of energy savings for QECB compliance purposes, the guidance encourages project developers to use ENERGY STAR® Portfolio Manager (or other energy management and monitoring practices) to establish energy use baselines and track upgrade performance.

⁶ A sample certification is attached to the Treasury/IRS guidance in the Appendix, available here: <http://www.irs.gov/pub/irs-drop/n-12-44.pdf>

⁷ More information on ASHRAE Level III audits available here: <http://www.ashrae.org/>

techniques and estimating software, including the DOE2 Quick Energy Simulation Tool (eQUEST®),⁸ other qualified software for calculating commercial building energy and power cost savings that meet federal tax incentive requirements as listed by the U.S. Department of Energy,⁹ or other tools that use reasonable and consistently applied methods.

- **Energy savings can be measured in a single building, across a portfolio of buildings, or within certain building system components**

The 2012 Guidance also provides potential issuers flexibility in meeting the 20 percent energy use reduction test. Beyond reducing a single building's energy use by at least 20 percent (a conservative standard that many past issuers have used), the guidance clarifies that issuers can pass the test by achieving an average of 20 percent savings across a portfolio of buildings. This updated guidance will overcome eligibility uncertainty faced by a number of issuers, including the City of Philadelphia, in which projects in some buildings were expected to achieve less than 20 percent savings while projects in other buildings were expected to achieve well above 20 percent savings for a portfolio-wide average well above 20 percent.¹⁰ Importantly, the new guidance also indicates that issuers can meet the 20 percent test by reducing energy use in one or more building system components (in a single building or across multiple buildings) rather than reducing overall building(s) energy use by 20 percent. These building system components include heating, ventilation and air conditioning (HVAC); hot water; lighting; building plug loads; and building envelope. For example, a lighting upgrade that reduces lighting energy consumption by greater than 20 percent but only reduces overall building energy use by 5 percent qualifies as a project eligible for QECB funding.

Promoting Energy Conservation Creativity through Green Community Programs

Green community programs (GCPs) are another eligible use of QECB proceeds, but were not defined in Federal authorizing legislation. The 2012 Guidance provides additional guidance on the broad range of programs that can qualify under the GCP designation, specifying that GCPs must meet two requirements:

1. Programs must promote, “energy conservation, energy efficiency or environmental conservation initiatives relating to energy consumption, broadly construed;” and
2. Programs must also involve property that is available for general public use or involve a loan or grant program that is broadly available to members of the general public.¹¹

The guidance provides examples of eligible initiatives including:

- Retrofitting initiatives for heating, cooling, lighting, water-saving, storm-water reducing or other efficiency measures;

⁸eQUEST® is a free whole building energy performance design tool. More information available here:

http://apps1.eere.energy.gov/buildings/tools_directory/software.cfm/ID=575/pagename=alpha_list

⁹List of eligible software tools available here: http://apps1.eere.energy.gov/buildings/tools_directory/

¹⁰ The city funded just two of four building upgrades with QECBs because, while the suite of upgrades achieved, on average, savings of greater than 20 percent across the four buildings, two buildings were expected to reduce energy use by less than 20 percent. For more information on Philadelphia's QECB issuance, visit LBNL's Philadelphia QECB case study:

<http://financing.lbl.gov/reports/public-building-qecb.pdf>.

¹¹ GCPs need not be open to a jurisdiction's entire geography nor all of the residents and/or businesses in the jurisdiction, provided that the program broadly benefits the general public.

- Distributed generation initiatives;
- Transportation initiatives that conserve energy and/or support alternative fuel infrastructure (e.g. improvements to public bicycle paths or mass transit systems);
- Improvements to public infrastructure that enhance proximity and connectivity between community assets and public transit to reduce motor vehicle use; and
- Public street lighting upgrades.¹²

Additional Resources

For additional QECB resources, visit:

- DOE's QECB Resources Web Page:
<http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html>
- LBNL's QECB Resources Web Page:
<http://financing.lbl.gov>

To request technical assistance on QECBs, send an email to:

TechnicalAssistanceProgram@ee.doe.gov

¹² For more information on QECB-funded street lighting projects, visit LBNL's San Diego QECB case study:
<http://financing.lbl.gov/reports/street-lighting-qecb.pdf>