

Energy Programs Consortium Memorandum

To: State Energy Officials

From: Elizabeth Bellis, Counsel, EPC

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917-370-7916

Date: 2/6/2012 Re: QECBs¹

IRS Circular 230 Disclosure: This information is intended for state and territory officials only and was not intended or written to be used, and cannot be used by any taxpayer, for the purpose of avoiding penalties that may be imposed on the taxpayer under U.S. Federal tax law.

In its role as a technical assistance provider for states and local governments interested in energy program finance, Energy Programs Consortium ("EPC") has asked me to direct a project to provide technical assistance to state and local governments on QECBs and related financing programs. In this capacity, the National Association of State Energy Officials (NASEO) requested I prepare this memo for state energy officials interested in qualified energy conservation bonds ("QECBs").² If you have reviewed prior versions of this memo, you may wish to skip to page 5 for new information about barriers to issuance and a summary of the changes in the data since the prior memorandum dated November 29, 2011.

As many of you are now aware, in 2009, Congress increased to \$3.2 billion the funding for states, large local governments and tribal governments to issue qualified energy conservation bonds to finance renewable energy and energy efficiency projects. The total allocation was divided amongst the state, local and tribal issuers according to population, as shown in Table 1A attached to this memorandum.

P a g e | 1 EPC Memo February 2012

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¹ For more information, you can also contact Rebekah King, Research Associate, at rking@energyprograms.org or 202-333-5915. Ms. King contributed substantially to the preparation of this update, including research, data compilation and analysis, and drafting.

² QECBs are similar to Build America Bonds ("BABs") in that the interest on QECBs is taxable but the federal government offers a direct cash subsidy to the bond issuer to subsidize the interest costs. The subsidy on QECBs is twice as large as the BAB subsidy, making QECBs an extremely low-cost financing option for many issuers.

At least 99 projects totaling over \$610 million have been funded with QECBs in 23 states to date. Some states, like Kansas and Kentucky, have exhausted or nearly exhausted their allocations, while others still have millions of dollars to spend. Additional issuances are being planned in at least 20 states.

The authority to issue these bonds does not sunset under current federal law.

Qualified Energy Conservation Bond Process and Mechanics

As described above, Treasury allocated bond volume to the states, which in turn sub-allocate a portion of this authority to large local governments and municipalities (population 100,000 or more). These counties or municipalities may waive their allocations and return them to the states. 5

The issuer sells taxable QECBs to investors and the bond proceeds are used to fund a qualified project (see below for a description of qualified projects).

Issuers can choose to issue taxable bonds with a corresponding tax credit to the holders of the bonds or (as is more commonly done) elect to receive a direct cash payment from Treasury in lieu of the allowance of the tax credit to the holders.

In the more popular direct pay QECB, the issuer pays a taxable coupon to the investor and repays principal at the end of the term. In conjunction, the issuer may make level annual payments into a fund known as a "sinking fund," for payment of principal. Sinking funds are invested at the permitted sinking fund yield established at pricing (not shown in the Department of Energy (DOE) QECB Primer illustration below). Treasury pays issuer the lesser of the taxable coupon rate or 70% of the tax credit rate.

Whichever option the issuer chooses, the QECB subsidy is generally correlated with Treasury yields and has historically ranged from 2.9-4.1%. This corresponds to net financing costs for issuers of around 0.5- 1.5%. In addition, QECBs are fairly long-term financing options. The maximum amount of time the bonds can be outstanding ("maturity") is set by the government and has historically ranged from 12.5-19 years. ⁶ Up to date QECB rates and maturities can be found online at https://www.treasurydirect.gov/GA-SL/SLGS/selectQTCDate.htm.

known to us. ⁶ Source: Wells Fargo

P a g e | 2 EPC Memo February 2012

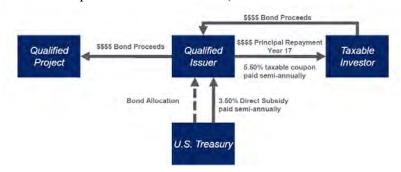
³ Partial data suggests the following issuances may have occurred or be imminent: Dutchess County, NY \$3.1 million; Erie County, NY \$5.5 million; Monroe County, NY \$5.5 million; Tompkins County, NY \$1 million; Buffalo, NY \$2.8 million; Yonkers, NY \$2.1 million; and Brookhaven, NY \$2.9 million.

⁴ See Notice 2009-29 (state by state allocations). The sub-allocation process has not been completed in some states.

⁵ States have used a number of different approaches to the waiver process. One approach is to require large local governments to affirmatively waive their allocations before treating them as waived back to the state for use or reallocation. Another approach is to require large local governments to notify the state by a certain date of their intent to utilize their allocation (with failure to notify being treated as waiver). A third approach is to require large local governments to affirmatively waive their allocations if a plan of use is not developed by a certain date. Some bond counsel have questioned the validity of the latter two approaches and the issuances stemming from forced waiver allocations; state counsel have occasionally questioned the authority of the state to require local government waivers. As such, affirmative waivers appear to be the more conservative approach of the various approaches

*Net Interest Cost Example from the DOE QECB Primer*⁷:

- 6.00%----Taxable rate
- 3.70%----Minus Direct Subsidy (5.29% tax credit rate x 70% subsidy)
- 2.30%----Equals Net Interest Cost (Taxable Rate-Direct Subsidy)



EPC is supporting an ongoing project to provide technical assistance to states to develop energy efficiency finance and renewable energy programs. We have developed a capacity to examine options for states to issue tax credit bonds to support the financing of energy projects. We are also coordinating efforts with the National Association of State Energy Officials (NASEO), DOE and Lawrence Berkeley National Laboratory to provide model documents and other QECB resources.⁸

Qualified Projects

QECBs may only be issued for qualified conservation purposes as defined in section 54D of the U.S. Internal Revenue Code. "Qualified conservation purposes" include capital expenditures:

- 1. To reduce energy consumption in publicly owned buildings by at least 20%9
- 2. To implement green community programs (including the use of grants, loans, or other repayment mechanisms to implement such programs)
- 3. For rural development (including producing renewable energy)
- 4. For certain renewable energy facilities (such as wind, solar, and biomass)¹⁰

The DOE QECB Primer indicates that a green community program can finance retrofits of existing private buildings through loans and/or grants to individual homeowners or businesses, or through other repayment mechanisms. Retrofits can include heating, cooling, lighting, water, conservation, storm water-reduction¹¹, or other efficiency measures.¹² However, issuers should

P a g e | 3 EPC Memo February 2012

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⁷ The DOE QECB Primer may be found at: http://www1.eere.energy.gov/wip/pdfs/qecb creb primer.pdf

⁸ The NASEO QECB resource page may be found at: http://www.naseo.org/resources/financing/qecb/index.html

⁹ One issuer reported that the IRS provided informal guidance that these savings may need to be measured on a building-by-building basis; at least one issuer has issued bonds measuring savings on a portfolio basis.

¹⁰ Other qualified purposes include research activities, mass commuting facilities, demonstration projects, and public education campaigns.

¹¹ One issuer reported that the IRS declined to rule favorably on whether water-conserving improvements were valid uses of QECBs issued under the 20% reduction in energy consumption prong of the eligible conservation purposes definition.

¹²http://www1.eere.energy.gov/wip/solutioncenter/pdfs/taking_advantage_of_qualified_energy_conservation_bonds _qecbs_presentation.pdf

keep in mind that IRS/Treasury, and not DOE, will audit bond issuances for compliance with section 54D and are not bound by DOE interpretation of IRS and Treasury rules and regulations. In addition, IRS and Treasury have provided little written guidance to address the more detailed questions most issuers have. A working relationship with experienced bond counsel is critical for potential issuers.

QECB Project Examples

Municipal Energy Efficiency -- Waterbury, CT

The Connecticut Development Authority issued \$3.8 million of QECBs on August 12, 2010. Funds generated from the QECBs went toward heating and air conditioning improvements and window replacement for the Waterbury city hall and library.¹³

Multifamily Energy Efficiency – Boulder, CO

The Boulder Housing Partners (BHP) issued \$1.5 million of QECBs on August 25, 2010 to increase energy efficiency in public housing projects. BHP used the bond proceeds for an Energy Performance Contract (EPC) to do weatherization and other energy reduction improvements on BHP's eight Public Housing sites. The EPC is expected to reduce carbon emissions in BHP's housing by 6,915 metric tons over the life of the project. ¹⁴

Renewables -- Los Angeles, CA

The Department of Water and Power of the City of Los Angeles issued \$131 million of QECBs on August 17, 2010 to expand their existing wind facility with the addition of 10 1.5 MW wind turbines as well as to build and operate a solar photovoltaic electrical generation facility. 15

Green Community Programs--Residential Energy Efficiency Loans -- St. Louis, MO The city of St. Louis is using its \$10.7 million, issued April 19, 2011, in QECB funding for a residential energy efficiency loan program, which will provide unsecured loan financing for energy efficiency improvements to homes, with a maximum loan amount of \$15,000. 16

Green Community Programs -- Commercial PACE -- Boulder, CO

The city of Boulder issued \$1.575 million in QECBs on November 5, 2010 and is using the funds for a Commercial PACE Program (funding commercial retrofits and efficiency improvements repaid through an annual property assessment).

University Improvements -- Louisville, KY

On December 15, 2010, the University of Louisville issued \$20,942,000 in QECBs. It combined this funding with Build America Bonds to make improvements (using energy service performance contracting) within seventeen education and general buildings. The improvements

P a g e | 4 EPC Memo February 2012

¹³ http://www.ctcda.com/Financing/Bond Financing/QUALIFIED ENERGY CONSERVATION BONDS/

¹⁴ http://www.stateenergyreport.com/using-qecbs-for-multifamily-housing-upgrades-a-case-study/

¹⁵ http://www.treasurer.ca.gov/cdlac/news/summary.pdf

¹⁶ For information on the loan program, see www.stlouissaves.com. See also LBNL's Policy Brief: http://eetd.lbl.gov/ea/emp/reports/ee-policybrief_062011.pdf and DOE presentation on Taking Advantage of QECBs: http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html

consisted of lighting retrofits, HVAC system replacement, building controls, motors, belts, water conservation, commissioning, and training.¹⁷

Utilization Trends

The most common use of QECBs has been to reduce energy consumption in publicly owned buildings by at least 20 percent through capital improvements. For example, such issuances make up 56 percent of total issuances and 100 percent of issuances in the Northwest and Southeast (regions with highest proportion of allocations used for 20 percent issuances). However, of the QECBs issued in the Southwest, 76 percent have been used for renewable energy facilities, like installing solar panels at public schools. Only two issuances nationwide are known have been used as green community programs (St. Louis, MO and Boulder, CO).

Across the country, state utilization rates range from complete lack of utilization (0 percent issued in a number of states) to complete exhaustion of allocation (100 percent issued in Kansas). See Table 1C. In addition to Kansas, state leaders include Kentucky (93 percent), South Dakota (79 percent) and California (71 percent). Twenty-eight states are not known to have issued any QECBs.

Regionally, utilization rates range from about 6 percent in the Southeast to almost 60 percent in the Southwest. See Graph 5. The Northeast, Midwest, Northwest and Central regions have utilization rates ranging from about 10.9 percent to 17.4 percent.

At the municipal level, issuances have ranged from as small as \$120,000 for Rantoul Township High School District 193 in Champaign County, Illinois to as large as \$131 million for the Los Angeles Department of Water and Power in California. See Table 1B. Large metropolitan areas that have issued QECBs include the City of Chicago, Las Vegas, Los Angeles, San Diego, and St. Louis. Many large metropolitan areas are not yet known to have utilized their allocations, however, and might benefit from coordination with state and territorial energy officials.

Updates Since November 29th

Since EPC's November 29th version of the QECB memo, the total number of known QECB issuances has increased to 99 projects in 23 states, up from 83 projects in 21 states. The increased figure reflects both new and older but previously unknown issuances.

Four new QECB issuances are Somerton, Arizona (approximately \$1 million for solar technology for the public safety building and senior center), Navajo County/City of Show Lo, Arizona (\$723,000 for an energy performance contract project), York County, Pennsylvania (\$2.2 million to retrofit city facilities), and Lowell, Massachusetts (\$2.6 million for energy efficiency projects).

EPC also learned of a number of older, previously-unknown issuances that occurred over the past year. Many of these were in California: Sonoma County (\$1.9 million of QECBs for lighting retrofits, new air handlers, and a new air compressor for the fleet maintenance shop in August 2010); Yolo County (\$2 million for energy efficiency purposes in March 2011); Kern

P a g e | 5 EPC Memo February 2012

¹⁷ See DOE presentation on Taking Advantage of QECBs: http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html

County (\$4.3 million for solar arrays at the County Jail and the County Administrative Office in April 2011); the City of San Diego (\$13 million for lighting conversion in April 2011); Santa Barbara County (\$4 million for solar in May 2011), and Los Angeles County (\$14 million for solar projects in August 2011). In Colorado, the University of Colorado issued \$4.3 million of QECBs in October 2010 for energy improvements to the Medical campus. In Massachusetts, previously unknown QECB issuances include the Town of Gill (\$127,000 for energy efficiency improvements through an energy performance contract in August 2011); Pentucket Regional School District (\$4.5 million in October 2011 for school improvements); the Town of Fairhaven (\$3 million for a wind energy project with partner Fairhaven Wind).

Taking into account all of these issuances, total known QECB issuances have now reached \$614 million, an 12 percent increase from the November 29th figure of \$547 million.

Two states new to our issuance list, Georgia and New Hampshire, have recently issued QECBs. State utilization rates increased in seven states: Arizona, California, Colorado, Massachusetts, New Hampshire, North Dakota, and Pennsylvania. Utilization rate increases for California, Colorado, Massachusetts, New Hampshire and North Dakota are due primarily to the inclusion of prior issuances not previously known to EPC, but Arizona, Massachusetts, and Pennsylvania experienced increases due to new issuances.

Utilization rates in most regions have also increased. The Southwest is up to 60 percent from 50 percent, the largest increase of any region (due to our discovery of prior issuances in California and two new issuances in Arizona).

Graph 2 shows the rate of QECB issuances on a quarterly basis beginning in the first quarter of 2010. At \$43.4 million, the volume of issuance in the fourth quarter of 2011 represents a 35 percent decline in the quarterly QECB issuance rate from the third quarter of 2011. QECBs issuances began in the first quarter of 2010. The amount of QECBs issued in the fourth quarter of 2011 is the third lowest amount of any quarter (with smaller amounts issued seen only in the first two quarters of 2010, when direct pay QECBs were unavailable or new).

Barriers to the Use of QECBs

EPC and NASEO did extensive outreach to state governments in December 2011 to confirm issuance data and ask questions about state experiences with barriers to issuing QECBs. Twelve states ¹⁸ provided information about barriers to issuances in their state. The most commonly cited barriers were a) small allocations ¹⁹ (4 states or 33 percent of those that provided information) b) debt aversion at state and local levels (3 states or 25 percent), and c) lack of awareness, familiarity and/or understanding of QECBs or bonds generally at the state and local levels ²⁰ (2

P a g e | 6 EPC Memo February 2012

¹⁸ Those 12 states were Arizona, Arkansas, District of Columbia, Illinois, Maine, Maryland, New Mexico, North Dakota, Tennessee, Texas, Virginia, and Wyoming. The city of Las Vegas also provided information.

¹⁹ Small allocations often mean high transaction cost per dollar of bonds issued, since transaction costs in many cases are relatively fixed regardless of the size of an issuance.

²⁰ In some states a particular agency must be utilized whenever bonds are to be issued; in others a number of different agencies were possible candidates for implementing the QECB program and one was chosen and designated in an executive order or state legislation authorizing the QECB program and sub-allocations. At least 23 State Energy Offices (SEOs) were charged with implementing QECBs in their states. In other states, bonding

states or 17 percent).

Information Sharing and Technical Assistance

If you are exploring your options for energy program financing through QECBs, EPC and NASEO can offer assistance by sharing other state and governmental officials' experiences, putting you in touch with issuers who have dealt with similar issues, and reviewing your financing structure to provide comments and feedback. Conversely, if you have any experiences to share, we would very much like to hear from you so that other state and local governments may benefit from your work. This effort is being undertaken in a coordinated way with the NASEO Energy Financing Task Force, and EPC and NASEO will provide updates on these efforts on an ongoing basis.

If you would like more information on the issues listed above or if you have information on your state to feature, please contact me at ebellis@energyprograms.org and Diana Lin at dlin@naseo.org.

authorities, development authorities, or other agencies have been authorized to run the QECB programs. Increased coordination across state and local agencies could facilitate implementation.

P a g e | 7 EPC Memo February 2012

| Table 1A: State and Local Issuances of QECBs (1/30/2012) | | | | | | |
|--|----------|--------------------------|------|-------------|-----|--------------------------|
| State | Amount | | Issu | ıed | Ren | naining |
| Alabama | \$ | 48,364,000 | \$ | - | \$ | 48,364,000 |
| Alaska | \$ | 7,120,000 | \$ | - | \$ | 7,120,000 |
| Arizona | \$ | 67,436,000 | \$ | 16,023,804 | \$ | 51,412,196 |
| Arkansas | \$ | 29,623,000 | \$ | | \$ | 29,623,000 |
| California | \$ | 381,329,000 | \$ | 272,480,171 | \$ | 108,848,829 |
| Colorado | \$ | 51,244,000 | \$ | 27,059,880 | \$ | 24,184,120 |
| Connecticut | \$ | 36,323,000 | \$ | 9,800,000 | \$ | 26,523,000 |
| Delaware | \$ | 9,058,000 | \$ | - | \$ | 9,058,000 |
| District of Columbia | \$ | 6,140,000 | \$ | - | \$ | 6,140,000 |
| Florida | \$ | 190,146,000 | \$ | - | \$ | 190,146,000 |
| Georgia | \$ | 100,484,000 | \$ | 5,372,000 | \$ | 95,112,000 |
| Hawaii | \$ | 13,364,000 | \$ | - | \$ | 13,364,000 |
| Idaho | \$ | 15,809,000 | \$ | - | \$ | 15,809,000 |
| Illinois | \$ | 133,846,000 | \$ | 44,370,000 | \$ | 89,476,000 |
| Indiana | \$ | 66,155,000 | \$ | 3,300,000 | \$ | 62,855,000 |
| Iowa | \$ | 31,150,000 | \$ | - | \$ | 31,150,000 |
| Kansas | \$ | 29,070,000 | \$ | 29,070,000 | \$ | - |
| Kentucky | \$ | 44,291,000 | \$ | 41,306,080 | \$ | 2,984,920 |
| Louisiana | \$ | 45,759,000 | \$ | - | \$ | 45,759,000 |
| Maine | \$ | 13,657,000 | \$ | - | \$ | 13,657,000 |
| Maryland | \$ | 58,445,000 | \$ | 6,515,000 | \$ | 51,930,000 |
| Massachusetts | \$ | 67,413,000 | \$ | 22,549,237 | \$ | 44,863,763 |
| Michigan | \$ | 103,780,000 | \$ | - | \$ | 103,780,000 |
| Minnesota | \$ | 54,159,000 | \$ | 12,005,000 | \$ | 42,154,000 |
| Mississippi | \$ | 30,486,000 | \$ | - | \$ | 30,486,000 |
| Missouri | \$ | 61,329,000 | \$ | 11,440,000 | \$ | 49,889,000 |
| Montana | \$ | 10,037,000 | \$ | - | \$ | 10,037,000 |
| Nebraska | \$ | 18,502,000 | \$ | - | \$ | 18,502,000 |
| Nevada | \$ | 26,975,000 | \$ | 8,135,950 | \$ | 18,839,050 |
| New Hampshire | \$ | 13,651,000 | \$ | 1,129,348 | \$ | 12,521,652 |
| New Jersey | \$ | 90,078,000 | \$ | - | \$ | 90,078,000 |
| New Mexico | \$ | 20,587,000 | \$ | - | \$ | 20,587,000 |
| New York | \$ | 202,200,000 | \$ | 3,569,470 | \$ | 198,630,530 |
| North Carolina | \$ | 95,677,000 | \$ | - | \$ | 95,677,000 |
| North Dakota | \$ | 6,655,000 | \$ | 3,780,000 | \$ | 2,875,000 |
| Ohio | \$ | 119,160,000 | \$ | 17,995,705 | \$ | 101,164,295 |
| Oklahoma | \$ | 37,787,000 | \$ | - | \$ | 37,787,000 |
| Oregon | \$ | 39,320,000 | \$ | <u>-</u> | \$ | 39,320,000 |
| Pennsylvania | \$ | 129,144,000 | \$ | 28,779,560 | \$ | 100,364,440 |
| Rhode Island | \$ | 10,901,000 | \$ | - | \$ | 10,901,000 |
| South Carolina | \$ | 46,475,000 | Ф | 6 575 000 | \$ | 46,475,000 |
| South Dakota | \$ | 8,343,000 | \$ | 6,575,000 | \$ | 1,768,000 |
| Tennessee | \$ | 64,476,000 | \$ | - | \$ | 64,476,000 |
| Texas | | 252,378,000 | | 5 000 070 | | 252,378,000 |
| Utah | \$ | 28,389,000 | \$ | 5,000,970 | \$ | 23,388,030 |
| Vermont | \$ \$ | 6,445,000 | \$ | - | \$ | 6,445,000 |
| Virginia Washington | \$ | 80,600,000 | \$ | 17 005 000 | \$ | 80,600,000 |
| Washington West Virginia | \$ | 67,944,000 18,824,000 | \$ | 17,905,000 | \$ | 50,039,000 18,824,000 |
| Wisconsin | \$ | 58,387,000 | \$ | 20,270,000 | \$ | 38,117,000 |
| Wyoming | \$ | 5,526,000 | \$ | 20,270,000 | \$ | 5,526,000 |
| American Samoa | \$ | | \$ | | \$ | |
| Guam | \$ | 1,826,000 | \$ | | \$ | 673,000 1,826,000 |
| Northern Marianas | \$ | 899,000 | \$ | | \$ | 899,000 |
| Puerto Rico | \$ | 41,021,000 | \$ | | \$ | 41,021,000 |
| US Virgin Islands | \$ | 1,140,000 | \$ | | \$ | 1,140,000 |
| Total | \$ | 3,200,000,000 | \$ | 614,432,175 | \$ | 2,585,567,825 |
| | Ψ | 2,200,000,000 | Ψ | 011,102,170 | Ψ | 2,505,507,025 |

The information attached hereto has been gathered from various sources, including IRS Notice 2009-29, Municipal Securities Rulemaking Board, Department of Energy (DOE), Wells Fargo, state and local issuer websites, state and local government contacts. The amount issued figure may be rounded.

For more information, please contact Elizabeth Bellis at ebellis@energyprograms.org or Rebekah King at rking@energyprograms.org or 202-333-5915

Page | 8 EPC Memo February 2012

Chart compiled by Elizabeth Bellis, Director, QECB Program, and Rebekah King, EPC, and was funded by the Energy Foundation, Ford Foundation, and others. Chart includes all known QECB issuances through January 30, 2012, but may not include all QECB issuances.

| Table 1B: Qualified Energy Conservation Bond | ls Issued by State (| as of 1/30/2012 |) | | |
|---|----------------------|-----------------|----|-------------|---|
| Issued To | State | Issue Date | _ | unt Issued | Use of Proceeds |
| Somerton | Arizona | 11/22/2011 | \$ | 980,000 | Solar improvements |
| Tempe | Arizona | 7/1/2011 | \$ | 7,300,000 | Capital improvements |
| Tucson City | Arizona | 6/23/2010 | \$ | 5,590,000 | Capital improvements |
| Tucson City | Arizona | 6/9/2011 | \$ | 1,430,000 | Energy efficiency |
| Navajo County/ City of Show Lo | Arizona | 1/3/2012 | \$ | 723,804 | Energy efficiency |
| Fallbrook Public Utility District Project | California | 11/18/2010 | \$ | 3,400,000 | Solar improvements |
| Irvine Unified School District | California | 7/29/2010 | \$ | 4,840,000 | |
| Kern County | California | 4/12/2011 | \$ | 4,337,131 | Solar project |
| Lodi Unified School District Project | California | 11/18/2010 | \$ | 9,915,000 | Solar improvements in schools |
| Los Angeles | California | 10/25/2011 | \$ | 11,920,000 | City facilities retrofit |
| Los Angeles County | California | 8/31/2011 | \$ | 14,000,000 | |
| Los Angeles Dep't of Water & Power | California | 8/17/2010 | \$ | 131,020,000 | Solar & wind |
| Oxnard Union High School District Project | California | 9/29/2010 | \$ | 19,067,730 | Solar improvements in schools |
| Rancho Water District Financing Authority | California | 11/7/2011 | \$ | 9,870,000 | Capital improvements to water and wastewater facilities |
| | | | | | Streetlights and municipal capital |
| Richmond | California | 12/1/2010 | _ | 1,070,000 | improvements |
| San Diego | California | 4/15/2011 | \$ | 13,141,596 | Lighting conversion program |
| Santa Barbara County | California | 5/25/2011 | \$ | 4,170,000 | Renewable generation |
| Santa Clara County Photovoltaic Project | California | 2/10/2011 | \$ | 20,368,000 | Renewable generation |
| Sonoma County | California | 8/6/2010 | | 1,977,500 | |
| Yolo County | California | 3/16/2011 | \$ | 2,019,214 | |
| Yuba College Central Plant Efficiency Project | California | 6/3/2011 | \$ | 6,324,000 | |
| Yuba Community College | California | 6/21/2011 | \$ | | Renewable generation |
| Boulder County | Colorado | 2/2/2010 | \$ | 5,838,050 | Capital improvements |
| | | | | | |
| Boulder Housing Partners | Colorado | 8/25/2010 | _ | , , | Multi-family capital improvements |
| Boulder PACE | Colorado | 11/5/2010 | _ | 1,515,000 | PACE - commercial |
| City of Boulder | Colorado | 9/27/2010 | | 1,500,000 | Capital improvements |
| City of Englewood | Colorado | 9/15/2010 | \$ | 1,286,440 | Municipal capital improvements |
| Foothills Park & Rec Dt | Colorado | 8/13/2010 | _ | | Recreational capital improvements |
| Fort Collins City | Colorado | 6/28/2010 | _ | 6,410,000 | Smart Grid |
| Mesa County School District #51 | Colorado | 10/29/2010 | _ | 2,000,000 | School improvements |
| University of Colorado | Colorado | 10/20/2010 | _ | 4,375,000 | Higher ed capital improvements |
| Western State College | Colorado | 8/19/2010 | | 1,635,390 | Higher ed capital improvements |
| East Hartford | Connecticut | 4/10/2010 | \$ | 6,000,000 | |
| Waterbury City | Connecticut | 8/11/2010 | _ | 3,800,000 | Municipal capital improvements |
| Fulton county | Georgia | 8/23/2011 | \$ | 5,372,000 | |
| Champaign Cty (Rantoul) Township High School | | 10/20/2010 | | 120 000 | 0.1 |
| District 193 | Illinois | 12/20/2010 | | 120,000 | School improvements |
| Champaign Cty School District 116 (Urbana) | Illinois | 12/14/2010 | \$ | 585,000 | School improvements |
| City of Chicago | Illinois | 11/4/2010 | \$ | 29,665,000 | Water |
| Deerfield | Illinois | 9/26/2011 | \$ | 12,500,000 | Energy efficiency; wastewater reclamation facility reconstruction |
| McHenry CCSD | Illinois | 8/31/2011 | \$ | 1,500,000 | School improvements |
| Ivy Technical Community College | Indiana | 10/1/2010 | \$ | 3,300,000 | |
| Kansas Development Finance Authority | Kansas | 12/21/2010 | | _ / / | Kansas State University projects |
| Lawrence City | Kansas | 3/10/2011 | \$ | 8,721,000 | Renewable generation |
| Wyandotte County/Kansas Unified Govt. | Kansas | 11/18/2010 | _ | 2,530,000 | Municipal energy improvements |
| Louisville-Jefferson County Metro Govt. | Kentucky | 9/14/2010 | | 7,408,700 | Gov energy improvments |
| University of Kentucky | Kentucky | 11/19/2010 | \$ | 12,955,000 | School improvements |
| University of Louisville | Kentucky | 12/20/2010 | | 20,942,380 | School improvements |
| Public schools | Maryland | 7/27/2011 | _ | | School improvements |
| Belchertown | Massachusetts | 9/20/2011 | \$ | 3,140,000 | Energy efficiency |
| Cathartes Private Investments/ Westford Solar | Massachusetts | 8/22/2011 | \$ | 5,800,000 | Renewable generation |
| City of Northampton | Massachusetts | 12/22/2010 | s | 1,698,790 | Energy Efficiency improvements in public buildings |
| Fairhaven Wind | Massachusetts | 11/7/2011 | \$ | 3,035,957 | Renewable generation |
| Lowell | Massachusetts | 12/2/2011 | \$ | 2,648,000 | Energy efficiency |
| Pentucket Regional School District | Massachusetts | 10/21/2011 | \$ | 4,567,510 | School improvements |
| Scituate Wind/Town of Scituate | Massachusetts | 8/10/2011 | \$ | 1,531,480 | Renewable generation |
| Town of Gill | Massachusetts | 8/25/2011 | \$ | 127,500 | Energy efficiency |
| TOWN OF GIR | 1114334011430113 | 0/23/2011 | Ψ | 147,500 | Lines by contention by |

Page | 9 EPC Memo February 2012

| Issued To | State | Issue Date | Am | ount Issued | Use of Proceeds |
|--|----------------------------|-----------------|-------|-------------|-------------------------------------|
| ELY ISD #696 | Minnesota | 5/19/2011 | \$ | 2,810,000 | Energy efficiency in schools |
| Grant County | Minnesota | 2/1/2011 | \$ | 2,000,000 | Capital improvements |
| Itasca County | Minnesota | 2/8/2011 | \$ | 3,690,000 | Energy efficiency |
| New Hope Economic Development Authority | Minnesota | 11/18/2011 | \$ | 3,505,000 | Energy efficiency |
| Greene County | Missouri | 3/3/2011 | \$ | 1,130,000 | Energy efficiency |
| St. Louis County | Missouri | 4/29/2011 | \$ | 10,310,000 | Green community loan program |
| | | | | | |
| City of Reno | Nevada | 6/1/2010 | \$ | | HVAC retrofit for Reno City Hall |
| Las Vegas | Nevada | 3/16/2011 | \$ | | City facilities retrofit |
| Manchester | New Hampshire | 11/1/2010 | \$ | 1,129,348 | School improvements |
| | | | | | Financing expansion of Electric |
| Chautauqua County | New York | 1/19/2011 | \$ | | Generation Plant |
| Rochester City | New York | 6/16/2010 | _ | | HVAC replacement |
| Morton County (Mandan S.D.) | North Dakota | 4/11/2011 | \$ | 3,780,000 | School improvements |
| City of South Euclid | Ohio | 8/31/2011 | \$ | | Energy efficiency |
| Findlay | Ohio | 6/30/2011 | \$ | 518,010 | County facilities retrofit |
| | | | | | Energy efficiency and |
| Kent State University (Main Campus) | Ohio | 5/31/2011 | \$ | 7,000,000 | conservation improvements |
| | | | | | Energy efficiency and |
| Kent State University (Regional Campus) | Ohio | 3/30/2011 | \$ | 2,693,610 | conservation improvements |
| | | | | | Energy efficiency and |
| Kent State University (Stark Campus) | Ohio | 6/11/2010 | | , | conservation improvements |
| Licking County | Ohio | 9/29/2011 | \$ | 2,121,000 | County facilities retrofit |
| | | | | | Energy efficiency and |
| Owens State Community College | Ohio | 3/18/2010 | \$ | , , | conservation improvements |
| Pickaway County | Ohio | 12/15/2010 | \$ | 1,479,810 | County facilities retrofit |
| Allegheny County | Pennsylvania | 11/22/2010 | \$ | 9,389,560 | City facilities retrofit |
| | | | | | Capital improvements to prison |
| Commonwealth of PA/Penn St CTFS Partn | Pennsylvania | 9/30/2010 | \$ | - , , | facilities |
| Fayette County | Pennsylvania | 9/28/2011 | \$ | | County facilities retrofit |
| York County | Pennsylvania | 12/28/2011 | \$ | 2,200,000 | City facilities retrofit |
| Davison County (Mitchell) #17-2 | South Dakota | 11/10/2010 | \$ | , , | 1.5 MW wind turbine |
| Lake County | South Dakota | 6/1/2011 | \$ | | Renewable generation |
| Rapid City | South Dakota | 11/1/2011 | \$ | | School improvements |
| Utah County | Utah | 10/22/2010 | _ | | Energy efficiency |
| Bellingham City | Washington | 4/13/2011 | \$ | 6,500,000 | Energy efficiency |
| | | | | | Energy efficiency and HVAC |
| King County | Washington | 11/15/2010 | _ | - , , | project |
| Kitsap County | Washington | 12/16/2010 | _ | | Sewer financing |
| Thurston County | Washington | 10/26/2010 | _ | , , | City facilities retrofit |
| Yakima County | Washington | 9/8/2010 | \$ | 2,430,000 | Energy efficiency in courthouse |
| | | | | | Energy efficiency improvements to |
| Alma Center-Humbird-Merillan School District | Wisconsin | 8/18/2011 | _ | .,, | schools |
| Dane Co (Mount Horeb) ASD | Wisconsin | 4/18/2011 | | | Renewable generation |
| Jefferson School District | Wisconsin | 3/18/2011 | | | Energy efficiency |
| Menasha School Dist (Winnebago County) | Wisconsin | 6/28/2011 | \$ | 1,690,000 | School improvements |
| | | | | | Energy efficiency improvements to |
| Osseo Fairchild School District | Wisconsin | 11/1/2011 | _ | 750,000 | schools |
| Pleasant Prairie Village | Wisconsin | 8/16/2010 | \$ | 1,890,000 | City facilities retrofit |
| School Dist Hartford No. 1 (Dodge and | | | | | |
| Washington Counties) | Wisconsin | 4/11/2011 | \$ | 2,295,000 | Renewable generation |
| | | | | | Energy conservation/public |
| Western Wisconsin Tech College Dt | Wisconsin | 7/21/2010 | _ | 1,500,000 | education program |
| Western Wisconsin Tech College Dt | Wisconsin | 1/27/2011 | \$ | 1,500,000 | School improvements |
| Western Wissensin Teel C. II. Dr | W. | 7/07/00:: | [- | 1 200 000 | Sahaal immaaana sata |
| Western Wisconsin Tech College Dt | Wisconsin | 7/27/2011 | \$ | 1,200,000 | School improvements |
| Total Issued as of 1/30/2012 | | 1 | 8 | 614,432,175 | |
| Note: Abbreviation "EE" is energy efficiency; abbrevia | ntion "res" is residential | ; "HVAC" is Hea | ting, | | and Ventilation; "ed" is education; |

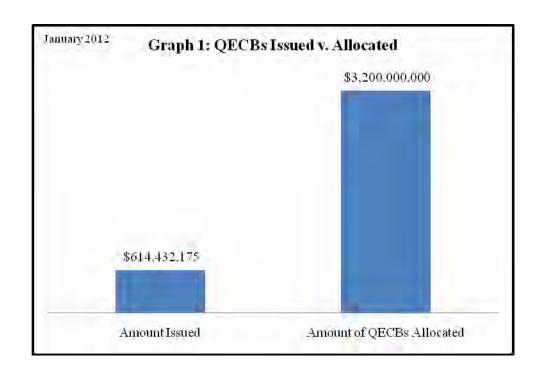
Note: Abbreviation "EE" is energy efficiency; abbreviation "res" is residential; "HVAC" is Heating, Air Conditioning, and Ventilation; "ed" is education; "bldgs" is Buildings.

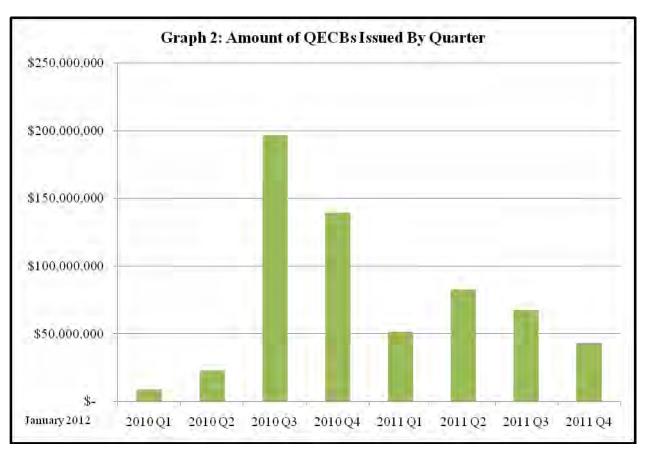
Note: Partial data suggests the following issuances may have occurred or be imminent: Dutchess County, NY \$3.1 million; Erie County, NY \$5.5 million; Monroe County, NY \$5.5 million; Tompkins County, NY \$1 million; Buffalo, NY \$2.8 million; Yonkers, NY \$2.1 million; and Brookhaven, NY \$2.9 million.

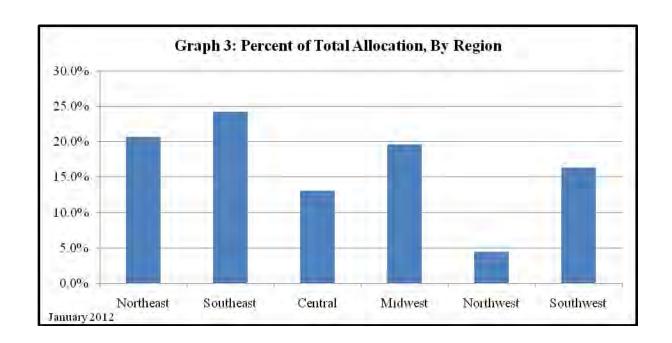
Page | 10 EPC Memo February 2012

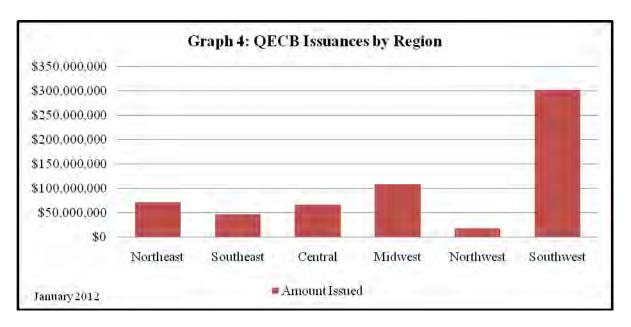
| State | Percent Issued |
|----------------------|----------------|
| Alabama | 0% |
| Alaska | 0% |
| American Samoa | 0% |
| Arizona | 24% |
| Arkansas | 0% |
| California | 71% |
| Colorado | 53% |
| Connecticut | 27% |
| Delaware | 0% |
| District of Columbia | 0% |
| Florida | 0% |
| Georgia | 5% |
| Guam | 0% |
| Hawaii | 0% |
| Idaho | 0% |
| Illinois | 33% |
| Indiana | 5% |
| Iowa | 0% |
| Kansas | 100% |
| Kentucky | 93% |
| Louisiana | 0% |
| Maine | 0% |
| Maryland | 11% |
| Massachusetts | 33% |
| Michigan | 0% |
| Minnesota | 22% |
| Mississippi | 0% |
| Missouri | 19% |
| Montana | 0% |
| Nebraska | 0% |
| Nevada | 30% |
| New Hampshire | 8% |
| New Jersey | 0% |
| New Mexico | 0% |
| New York | 2% |
| North Carolina | 0% |
| North Dakota | 57% |
| Northern Marianas | 0% |
| Ohio | 15% |
| Oklahoma | 0% |
| Oregon | 0% |
| Pennsylvania | 22% |
| Puerto Rico | 0% |
| Rhode Island | 0% |
| South Carolina | 0% |
| South Dakota | 79% |
| Tennessee | 0% |
| Texas | 0% |
| US Virgin Islands | 0% |
| Utah | 18% |
| Vermont | 0% |
| Virginia | 0% |
| Washington | 26% |
| West Virginia | 0% |
| Wisconsin | 35% |
| Wyoming | 0% |
| Total | 20% |

Page | 11 EPC Memo February 2012

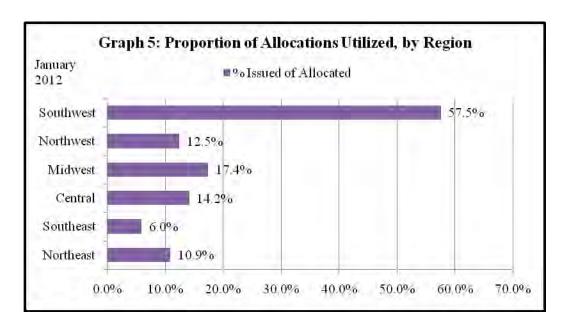


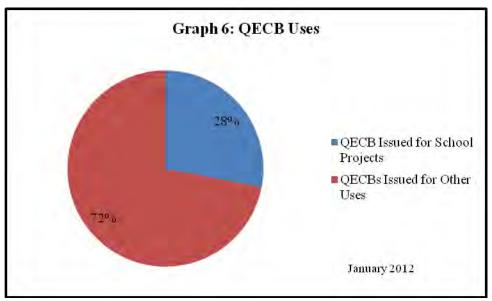




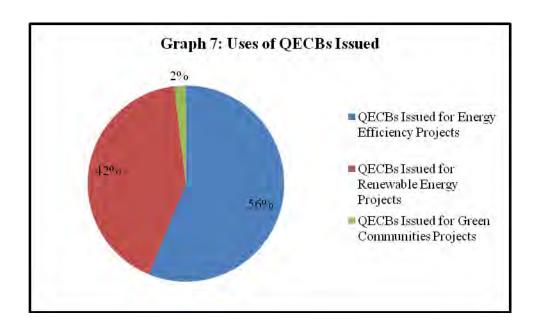


P a g e | 13 EPC Memo February 2012





P a g e | 14 EPC Memo February 2012



Notes on Tables 1A, 1B, and Charts 1 - 7

1. Although IRS collects information on QECB issuances on Form 8038-TC, no government agency is currently sharing QECB issuance information. As such, it is not possible to ascertain the exact number and quantity of QECB issuances to date. The information attached hereto has been gathered from various sources, including IRS Notice 2009-29, Municipal Securities Rulemaking Board, Department of Energy, Lawrence Berkeley National Laboratory, Wells Fargo, state and local issuer websites, and government contacts.

2. Figures are rounded up.

P a g e | 15 EPC Memo February 2012