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### **Title**

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## Aggregating QECB Allocations & Using QECBs to Support the Private Sector: A Case Study on Massachusetts

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 interest rates and long terms. While small allocation sizes have deterred some local governments from pursuing issuances, state agencies in Massachusetts have partnered with local governments to aggregate QECBs to support a range of public and private projects. In most states, QECBs have been utilized primarily to fund energy conservation projects for public entities, but Massachusetts has facilitated over \$10 million of private activity QECB issuances to support three privately-owned renewable energy projects—with more projects in the pipeline.

### 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.<sup>1</sup> 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 (ARRA). 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.<sup>2</sup> A QECB is among the lowest-cost public financing tools available for clean energy projects because the U.S. Treasury (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 payments 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.

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

<sup>2</sup>Overview of QECB issuances available: [http://www.energyprograms.org/wp-content/uploads/2012/03/QECB\\_Memo\\_6-8-2.pdf](http://www.energyprograms.org/wp-content/uploads/2012/03/QECB_Memo_6-8-2.pdf)

QECBs are allocated to states based on their population size, and QECB regulations require states to sub-allocate a portion of their QECB award to large local governments. In some cases, these sub-allocations have been quite small (many under \$1 million) and local governments have decided not to pursue QECB issuances due to high issuance costs relative to the amount of capital raised. While states like California and Colorado have instituted “use it or lose it” QECB claw back policies to aggregate unused QECB allocations at the state level for redistribution or issuance, many states have not and are struggling with low local government participation in voluntary QECB reversion initiatives.<sup>3</sup>

QECB regulations also stipulate that a maximum of 30 percent of each state’s QECB allocation may be used for private business activity purposes. These private activity projects involve the issuance of QECBs by a public entity to finance qualified energy conservation projects for a private user (e.g. a conduit issuance). The underlying security for these bonds can vary, but typically does not put the public bond issuer at financial risk. This 30 percent limit applies to a state’s entire bond issuance capacity, not any single QECB issuance.

## **Working with Local Governments to Aggregate QECB Allocations**

In Massachusetts, three state agencies—the Department of Energy Resources (DOER), the Executive Office of Administration and Finance (ANF) and Mass Development, the Commonwealth’s economic development agency—played essential roles in the reversion of QECBs from local governments back to the state and their subsequent deployment to support over \$10 million of private renewable energy projects.

After initially distributing the state’s QECB allocation to large local governments, DOER managed the process through which municipalities voluntarily reverted unused QECB allocations back to the state. DOER and ANF implemented the competitive redistribution of \$50 million of QECBs (of \$67 million of QECBs allocated to Massachusetts by the US Treasury) that ultimately fell under its control and Mass Development was responsible for the issuance of the bonds for private activities.<sup>4</sup>

One of the key contributors to Massachusetts’ success with these reversions was DOER’s strong existing municipal relationships. DOER has regional coordinators in the field working with municipalities on their energy programs. DOER initially sent letters to local governments requesting that they revert their allocations if they didn’t intend to use them,<sup>5</sup> and then followed up with phone calls and a webinar describing the opportunities for using QECBs. At the same time, private sector renewable energy project developers were also advocating that local governments revert their QECB allocations to support private clean energy projects in their communities.

## **Supporting Private Development with QECB Allocations**

Both public and private sector demand for the state-controlled \$50 million QECB allocation has been robust—after three request for proposal (RFP) solicitations, none of the private allocation and \$4 million

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<sup>3</sup> QECBs do not have a statutory expiration date and local governments have often indicated they prefer to hold onto the option to use their allocations to fund future projects.

<sup>4</sup> Three local governments waived a total of \$15 million of QECB allocations back to the state.

<sup>5</sup> Municipalities were required to notify DOER in writing of their intent to waive their QECB allocations to the Commonwealth.

of the public allocation remains uncommitted.<sup>6</sup> Massachusetts had no problem getting interest from the private sector—each of its three QECB RFPs was oversubscribed. DOER managed the competitive QECB allocation process, and Mass Development was tasked with issuing QECBs on behalf of the private project developers. DOER and Mass Development staff credit several factors for the high private sector QECB demand:

- **Preexisting relationships.** Mass Development issues approximately 100 bonds a year to support a broad slate of economic development projects, which has enabled the agency to create an extensive network of local government partners, financial advisors, project developers, and investors. The agency receives half a dozen calls a week from energy project developers seeking funding, and it actively advertised the QECB opportunity to these companies.
- **Clean energy policy framework.** Massachusetts has developed a supportive policy framework for renewable generation including a renewable portfolio standard (RPS), a renewable energy credit (REC) initiative, and net metering, which support the development of solar and wind projects.
- **Past bonding experience.** Mass Development also provided critical support for these small projects by identifying QECB investors for project developers—the agency had completed many bond issuances for other federally-subsidized bonds like Build America Bonds in recent years and had built a network of regional banks familiar with these types of securities and willing to invest in small bond issuances.

One important lesson from these agencies' experience is that flexibility is essential in facilitating successful private issuances. Although allocations were made with a 6 month deadline for bond issuance, if a project was moving forward but unable to meet the deadline, DOER granted extensions. This was not uncommon given the complex permitting processes for private renewable energy projects.

One such project was the Westford Solar project, a \$23 million, 4.5 MW solar photovoltaic installation. Mass Development issued \$5.8 million of QECBs to support this privately-owned project, which will sell net excess generation credits to MIT Lincoln Laboratory,<sup>7</sup> a US Department of Defense Research and Development Laboratory. The rest of the project funding came through investments from a tax equity investor and the project developer, Cathartes Private Investments. The QECBs were issued by Mass Development as limited obligation bonds and are secured with project assets and revenue streams (i.e. leases, renewable generation credits). Cathartes pays a net interest rate of 2.7 percent (the gross interest rate on the bonds was 5.75 percent and Cathartes receives a 3.05 percent QECB subsidy) on the five year QECBs. Lee White, the QECB placement agent from George K. Baum & Co, noted that the QECB interest rate subsidy was critical to making this project go—without it, the net excess generation credit agreement would have been too expensive for Lincoln Lab.

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<sup>6</sup> While several million dollars of private activity QECBs remain unissued, they have been allocated to projects and issuances are expected in the coming months.

<sup>7</sup> Net excess generation credits are awarded to facilities whose renewable energy generation exceeds the facility's energy usage and may be sold to third parties. Lincoln Labs has agreed to a 20 year contract to purchase credits from the Westford solar project to offset the transmission and distribution charges it pays to its utility for a facility it operates in Westford, MA.

## Renewable Energy Project Development Challenges

It is important for potential QECB issuers to note that the expiration of key ARRA incentives have raised several major challenges for private renewable project developers. The 1603 cash grant program, which allowed project developers to receive federal renewable energy incentives as cash grants rather than tax credits, expired in 2011 with significantly negative implications for QECB-funded renewable energy projects:

- **Weak tax equity market.** The tax equity market remains hobbled by the sluggish economy and renewable energy developers face increasingly difficult project economics as they are typically not able to monetize as much value from tax credits as they received through the cash grant incentives.<sup>8</sup>
- **Forbearance & QECBs.** Forbearance involves third party tax equity investors requiring that QECB holders agree not to foreclose on defaulted debt during a “recapture period” (often up to five years) during which the tax equity investor is receiving tax credits from a renewable energy project. For many QECB investors, this is an unfamiliar concept that will likely reduce their willingness to purchase these bonds or necessitate more expensive financing that weakens project economics.
- **Wind project-specific QECB hurdle.** For wind projects, the value of the federal production tax credit is reduced in the event that projects use federally-subsidized financing like QECBs (the Recovery Act exempted 1603 cash grants and investment tax credit recipients from this subsidized financing provision), reducing the benefit that QECBs provide.

In the face of these challenges, future QECB-funded renewable projects may need to be limited to non-wind initiatives and supported by large renewable energy developers, with sufficient risk tolerance and balance sheets to protect QECB investors and take on the recapture risk themselves.

## Private QECB Issuance Outlook

While there are clear barriers to deploying private activity QECBs in the renewable energy space, these challenges are unique to these types of projects. QECBs can be used for any private project that is an eligible qualified energy conservation initiative, and several companies, including energy service companies (ESCOs) are considering using QECBs to fund private energy efficiency improvement projects. It is important to note that some seemingly private activities, such as residential and commercial energy efficiency loan funds, can be exempted from this 30 percent funding limit through the “green community program” designation. More information on green community programs available here: <http://financing.lbl.gov/reports/qecb-guidance.pdf>

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<sup>8</sup> Many project developers rely on third party investors to monetize the federal tax credits they receive (e.g. developers lack sufficient income to realize the value of the tax credits). Because there is greater supply of tax credits than demand for them, these investors often require significant discounts in the tax credit value—particularly for small projects (e.g. less than \$50-100 million). The reduction in the level of federal incentives that can be monetized has made developing renewable energy projects more difficult—with or without QECBs.

## Additional Resources

<b>Program Contacts</b>	
<b>Mass Development</b>	Rebecca Sullivan First Vice President <a href="mailto:rsullivan@massdevelopment.com">rsullivan@massdevelopment.com</a>
<b>Mass DOER</b>	Elise Avers Building Energy Program Coordinator <a href="mailto:elise.avers@state.ma.us">elise.avers@state.ma.us</a>
<b>QECB PAB Resources</b>	
Sample DOER RFP Solicitation <a href="http://financing.lbl.gov/MA_PAB_rfp.pdf">http://financing.lbl.gov/MA_PAB_rfp.pdf</a>	
<b>General QECB Resources</b>	
DOE QECB Website <a href="http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html">http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html</a> LBL QECB Web Portal <a href="http://financing.lbl.gov">http://financing.lbl.gov</a> To request technical assistance on QECBs, send an email to <a href="mailto:TechnicalAssistanceProgram@ee.doe.gov">TechnicalAssistanceProgram@ee.doe.gov</a>	

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