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Relationships That Drive Results

Renewable Energy Bond Financing

Clean Renewable Energy Bonds & Qualified Energy Conservation Bonds: Opportunities and Challenges

Clean Energy States Alliance
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Scope

- Legislative History of "old" Clean Renewable Energy Bonds ("CREBs"), New CREBs and Qualified Energy Conservation Bonds ("QECBs")
- General Characteristics of Governmental Tax-Exempt Bonds, New CREBs and QECBs
- Legal Requirements of New CREBs and QECBs
- Comparison of Direct Pay Subsidy v. Tax Credit Subsidy
- Case Studies
- Program Challenges

Legislative History

Old CREBs

- **Energy Policy Act of 2005**
  - ➔ Created old CREBs with $800m in authorization
- **Tax Relief and Health Care Act of 2006**
  - ➔ Modified and extended old CREBs by adding $400m in authorization
- **Emergency Economic Stabilization Act of 2008 (the "Stabilization Act")**
  - ➔ Extended old CREBs through 2009

New CREBs and QECBs

- **Heartland, Habitat, Harvest and Horticulture Act of 2008**
  - ➔ Created framework for New CREBs and QECBs
- **Stabilization Act**
  - ➔ Created New CREBs and QECBs with $800m in allocation for each
- **American Recovery and Reinvestment Act of 2009**
  - ➔ Increased allocation for New CREBs and QECBs to $2.4b and $3.2b, respectively
  - ➔ Subjected New CREBs and QECBs to Davis-Bacon prevailing wage rules
  - ➔ QECBs financing certain green community programs are not private activity QECBs
- **Hiring Incentives to Restore Employment Act of 2010**
  - ➔ Added direct-pay option for New CREBs and QECBs

General Characteristics

	Governmental Tax-Exempt	New CREBs & QECBs
Governmental Issuer Needed	√	√, with exceptions for New CREBs
Allocation-Volume Cap	N/A	√
Arbitrage-Rebate	√	√, with exceptions
Maturity Limitations	√	√
IRS Reports	Closing	Closing, Tax Credit & Direct Payment
Subsidy	Tax-Exempt interest, plus bank-qualification	Taxable - Tax Credit or Direct Payment
Types of Transactions	New money; current & advance refundings	New money only, subject to reimbursement limitations

New CREBs

- Eligibility for New CREBs
  - ➔ Qualified projects: wind, solar, geothermal, closed and open loop biomass, landfill gas, trash combustion and hydro, *plus* functionally related and subordinate facilities
  - ➔ 100% of available project proceeds ("APP") spent on capital expenditures incurred by qualified borrowers for qualified projects owned by a qualified borrower
    - APP = sales proceeds less financed costs of issuance (not to exceed 2%) *plus* earnings thereon

New CREBs (continued)

- Eligibility for New CREBs (continued)
  - ➔ Qualified borrowers: governmental and tribal bodies, mutual and cooperative electric companies and public power providers ("PPPs")
    - ➢ PPPs are state utilities providing electric services
  - ➔ Qualified issuers: qualified borrowers, a "CREB lender" (*e.g.*, CoBank and NRUCFC) and a not-for-profit electric utility which has received a loan or loan guarantee under the Rural Electrification Act

QECBs

- Eligibility for QECBs
  - ➔ Qualified Projects: qualified conservation purposes ("QCPs") – see following slides
    - ➢ 100% APP spent on QCPs
  - ➔ Qualified Issuers: tax-exempt bond issuers (*e.g.* state & local governmental entities)
  - ➔ Qualified Borrowers: qualified issuers and non-governmental entities subject to limitations
    - ➢ No more than 30% of the allocation may be used for non-governmental QECBs
    - ➢ If the QECB is a private activity bond, a QCP must be for capital expenditures
  - ➔ Capital expenditures to implement green community programs shall not be treated as private activity bonds solely because proceeds are to be used for such loans or grants to implement green community programs
  - ➔ Governmental QECBs may include working capital

QECBs (continued)

QCPs

Capital Expenditures for:	Research	Other
➢ Reducing energy consumption in publicly-owned buildings by at least 20%	Expenditures for research facilities and research grants to support research in:	➢ Mass commuting facilities to reduce energy consumption
➢ Implementing green community programs, includes "the use of loans, grants, or other repayment mechanisms to implement such programs"	➢ Cellulosic ethanol & non-fossil fuel development ➢ Technologies for the capture & sequestration of carbon dioxide produced through the use of fossil fuels	➢ Demonstration projects including commercialization of green building technology, agricultural biofuel conversion, advanced battery manufacturing technologies, technologies to reduce peak use of electricity or technologies for the capture & sequestration of carbon dioxide emitted from combusting fossil fuels to produce electricity
➢ Rural development involving production of electricity from renewable energy resources	➢ Increasing in efficiency of existing technologies for producing non-fossil fuels	➢ Public education campaigns to promote energy efficiency
➢ New CREBs projects	➢ Automobile battery technologies & other technologies to reduce fossil fuel consumption in transportation ➢ Technologies to reduce energy use in buildings	

Basic Rules for New CREBs and QECBs

- Tax credit rate
  - ➔ Established on sale date (*i.e.*, a date that there is a binding written contract for the sale of the bond)
  - ➔ Changes daily & posted at: http://www.treasurydirect.gov/govt/rates/rates_irstcb.htm
  - ➔ The tax credit rate is based off Treasury's estimate of the yields on outstanding bonds from market sectors selected by Treasury with a rating of between A & BBB for bonds of a similar maturity
    - ➢ Previously, the benchmark was a corporate note rated AA

Basic Rules (continued)

- Tax credit amount
  - ➔ Credit that is measured quarterly based on a formula that accounts for the credit rate & the outstanding amount of the obligation
  - ➔ Credit amount is reduced by 30%
- Direct Pay Option (New – effective after March 18, 2010)
  - ➔ Amount of subsidy payment is equal to the lesser of (1) the interest paid by the issuer on each interest payment date; or (2) 70% of the amount of interest that would have been payable had the issuer selected the tax credit option, and such interest was determined using the applicable tax credit rate
  - ➔ Amount of subsidy payment is intended not to be less than the tax credit subsidy
  - ➔ Subsidy may not be paid on OID

Basic Rules (continued)

- Maturity Limitation
  - ➔ Treasury sets maximum permitted maturity monthly, see: http://www.treasurydirect.gov/govt/rates/rates_irstcb.htm
  - ➔ The maturity is based off a present value calculation in which the discount rate is 110% of the long term adjusted applicable federal rate ("AFR") compounded semiannually
- Rules regarding proceeds
  - ➔ Issuance date expectations test for expenditures
    - ➢ 100% of APP by third anniversary
    - ➢ 10% of APP by six months

Basic Rules (continued)

- Rules regarding proceeds (continued)
  - ➔Actual Test for Expenditures
    - ➢Expenditure period: three years
    - ➢Period may be extended by Treasury
    - ➢Test: 100% of APP spent by end of period
    - ➢Failure to satisfy: redemption of nonqualified bonds within 90 days

Basic Rules (continued)

- Arbitrage-rebate rules generally apply
- Reserve fund exception from arbitrage-rebate
  - ➔ Not a traditional security reserve
  - ➔ Sizing restrictions
    - ➢ Expectation of use to repay bonds
    - ➢ Funded no more than in equal annual installments
    - ➢ No more than needed to repay
  - ➔ Yield on fund is restricted to semi-annual long term adjusted AFR (*i.e.*, discount rate for maximum permitted term a/k/a the permitted sinking fund yield)

Basic Rules (continued)

- Stripping of tax credits
  - ➔Tax credit may be separated from bond
  - ➔Tax-exempt bond stripping rules (IRC § 1286) to apply
  - ➔IRS Notice 2010-28 (dated 03/23/2010) provides interim guidance pending regulations
- Carryover of unused tax credits for the applicable taxpayer
- Financial conflicts of interest
  - ➔Issuer certifies compliance with:
    - State & local conflict of interest laws
    - Any additional Treasury rules
- Issuer must designate bond in the applicable category

Allocation Information

Attributes	Old CREBs	New CREBs	QECBs
Authorized Amount	$1.2b	$2.4b	$3.2b
Allocation Process (see "Allocation Award Information" below for more detail)	Awarded to governmental body and cooperative projects with no more than $400m to cooperative projects [1]	1/3 each to (i) public power providers, (ii) governmental bodies, and (iii) cooperative electric companies[2]	Allocated to the States in proportion to U.S. Population.[3] Sub-allocated by States to large local governments (at least 100k population) in proportion to State population, with the balance allocated at discretion of the State
Expiration and Reallocation of Allocation	Must have issued before January 1, 2010 per Notice 2009-33; no reallocation of unused amounts is expected.	Must issue within three (3) years of award date or it reverts to the IRS. Per the Oct. 27 Announcement, there may be a supplemental allocation round for cooperative projects. Per Notice 2009-33, the IRS plans to establish a program for relinquished or reverted allocation.	No expiration date for allocation States' rules vary on allocation QECB allocation may be waived by LLG At least 70% of allocation to be used for governmental bonds

[1] Allocation award information provided in IRS Information Release 2008-016 and IRS Notice 2006-181.
[2] Allocation application information provided in IRS Notice 2009-33 and allocation award information provided in the October 27, 2009 announcement of the US Treasury.
[3] Allocation to States provided in IRS Notice 2009-29.

Allocation Information (continued)

Attributes	Old CREBs		New CREBs	QECBs
Allocation Award Information ***Governmental***	***Round 1:*** Range: $23k to $32m Solar – 401 Wind – 99 Hydro – 8 Biomass – 1 LFGTE – 23	***Round 2:*** Range: $15k to $2.95m Solar – 128 Wind – 88 Hydro – 12 Biomass – 4 LFGTE – 41 Trash Combustion – 3	Range: $21,769 to $2,780,520 Solar – 694 Wind – 30 Hydro – 7 Biomass – 4 Geothermal – 4	**Arizona:** http://www.azcommerce com/BusAsst/Incentives/QECB.htm **California**: http://www.treasurer.ca. gov/cdlac/procedures.asp **Colorado:** http://www.colorado.gov/ energy/index.php?/policy/qualified-energy-conservation-bonds/ **Georgia**: http://gsfic.georgia. gov/00/channel_modifieddate/0,2096, 77323081_143399974,00.html **New Mexico**: http://www.emnrd.state. nm.us/ecmd/QECBs.htm **New York:** http://www.nyserda\ org/qecb.asp\ **Washington: h**ttp://www.commerce/ wa.gov/site/862/default.aspx
Cooperative	***Round 1:*** Range: $120,548 to $31m Solar – 33 Wind – 13 Hydro – 6 Biomass – 12 LFGTE – 13 Refined Coal – 1	***Round 2:*** Range: $300k to $30m Solar – 1 Wind – 14 Hydro – 6 Biomass – 12 LFGTE – 14	Range: $433k to $100m Solar – 4 Wind – 8 Hydro – 8 Biomass – 11	N/A
Public Power Providers	Not Applicable		Range: $74,663 to $140,046,217 Solar – 13 Wind – 9 Hydro – 12 Biomass – 1	N/A

Comparison of a Direct Pay vs. a Tax Credit

- Direct Pay:

SAMPLE ONLY

Par Amount of QECBs	1,000,000.00
Taxable QECBs Interest Rate	7.22%
Federal Tax Credit Rate (as of 3/23/10)	5.67%
QECBs Tax Credit Rate (70%)	3.97%
Net Effective Rate	3.25%
Final Maturity (yrs.)	15.00
Closing/Funding Date	6/15/10

Pmt. No.	Year No.	Payment Date	Taxable Outstanding Balance	Taxable Principal Portion	Taxable Interest Portion	Taxable Payment Amount	Treasury Subsidy Amount	Net Payment After Subsidy
1	1	12/15/10	1,000,000.00	-	36,097.06	36,097.06	19,845.00	16,252.06
2	1	6/15/11	947,213.02	52,786.98	36,097.06	88,884.04	19,845.00	69,039.04
3	2	12/15/11	947,213.02	-	34,191.60	34,191.60	18,797.44	15,394.16
4	2	6/15/12	892,710.24	54,502.78	34,191.60	88,694.38	18,797.44	69,896.94
5	3	12/15/12	892,710.24	-	32,224.21	32,224.21	17,715.83	14,508.38
6	3	6/15/13	836,435.90	56,274.34	32,224.21	88,498.55	17,715.83	70,782.72
7	4	12/15/13	836,435.90	-	30,192.88	30,192.88	16,599.07	13,593.81
8	4	6/15/14	778,332.42	58,103.49	30,192.88	88,296.36	16,599.07	71,697.29
9	5	12/15/14	778,332.42	-	28,095.51	28,095.51	15,446.01	12,649.50
10	5	6/15/15	718,340.33	59,992.09	28,095.51	88,087.60	15,446.01	72,641.59
11	6	12/15/15	718,340.33	-	25,929.97	25,929.97	14,255.46	11,674.51
12	6	6/15/16	656,398.25	61,942.08	25,929.97	87,872.05	14,255.46	73,616.59
13	7	12/15/16	656,398.25	-	23,694.05	23,694.05	13,026.22	10,667.82
14	7	6/15/17	592,442.79	63,955.45	23,694.05	87,649.50	13,026.22	74,623.28
15	8	12/15/17	592,442.79	-	21,385.44	21,385.44	11,757.03	9,628.41
16	8	6/15/18	526,408.52	66,034.27	21,385.44	87,419.71	11,757.03	75,662.68
17	9	12/15/18	526,408.52	-	19,001.80	19,001.80	10,446.58	8,555.22
18	9	6/15/19	458,227.87	68,180.65	19,001.80	87,182.45	10,446.58	76,735.88
19	10	12/15/19	458,227.87	-	16,540.68	16,540.68	9,093.53	7,447.15
20	10	6/15/20	387,831.07	70,396.81	16,540.68	86,937.48	9,093.53	77,843.95
21	11	12/15/20	387,831.07	-	13,999.56	13,999.56	7,696.51	6,303.05
22	11	6/15/21	315,146.07	72,684.99	13,999.56	86,684.55	7,696.51	78,988.04
23	12	12/15/21	315,146.07	-	11,375.85	11,375.85	6,254.07	5,121.77
24	12	6/15/22	240,098.52	75,047.55	11,375.85	86,423.40	6,254.07	80,169.33
25	13	12/15/22	240,098.52	-	8,666.85	8,666.85	4,764.76	3,902.10
26	13	6/15/23	162,611.61	77,486.91	8,666.85	86,153.76	4,764.76	81,389.00
27	14	12/15/23	162,611.61	-	5,869.80	5,869.80	3,227.03	2,642.77
28	14	6/15/24	82,606.06	80,005.55	5,869.80	85,875.35	3,227.03	82,648.32
29	15	12/15/24	82,606.06	-	2,981.84	2,981.84	1,639.32	1,342.52
30	15	6/15/25	0.00	82,606.06	2,981.84	85,587.90	1,639.32	83,948.58
		6/15/25		**1,000,000.00**	**620,494.19**	**1,620,494.19**	**341,127.72**	**1,279,366.47**

In a direct pay structure, the issuer receives the subsidy credit to offset the taxable interest cost

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Comparison of a Direct Pay vs. a Tax Credit

- Tax Credit:

SAMPLE ONLY

Par Amount of QECBs	1,000,000.00
Weighted Combined Interest Rate	7.68%
Federal Tax Credit Rate (as of 3/23/10)	5.67%
QECBs Tax Credit Rate (70%)	3.97%
Supplemental Coupon Rate	3.75%
Final Maturity (yrs.)	15.00
Average Life (yrs.)	8.44
Closing/Funding Date	6/15/10

Pmt. No.	Year No.	Payment Date	Payment Amount	Interest Portion	Principal Portion	Tax Credit Amount	Total QECB Payment	Outstanding Balance
		9/15/10				9,922.50	9,922.50	1,000,000.00
1	1	12/15/10	43,886.16	18,750.00	25,136.16	9,922.50	53,808.66	974,863.84
		3/15/11				9,673.09	9,673.09	974,863.84
2	1	6/15/11	43,886.16	18,278.70	25,607.46	9,673.09	53,559.25	949,256.38
		9/15/11				9,419.00	9,419.00	949,256.38
3	2	12/15/11	43,886.16	17,798.56	26,087.60	9,419.00	53,305.16	923,168.78
		3/15/12				9,160.14	9,160.14	923,168.78
4	2	6/15/12	43,886.16	17,309.41	26,576.75	9,160.14	53,046.30	896,592.03
		9/15/12				8,896.43	8,896.43	896,592.03
5	3	12/15/12	43,886.16	16,811.10	27,075.06	8,896.43	52,782.59	869,516.97
		3/15/13				8,627.78	8,627.78	869,516.97
6	3	6/15/13	43,886.16	16,303.44	27,582.72	8,627.78	52,513.94	841,934.25
		9/15/13				8,354.09	8,354.09	841,934.25
7	4	12/15/13	43,886.16	15,786.27	28,099.89	8,354.09	52,240.25	813,834.36
		3/15/14				8,075.27	8,075.27	813,834.36
8	4	6/15/14	43,886.16	15,259.39	28,626.77	8,075.27	51,961.43	785,207.60
~	~	~	~	~	~	~	~	~
~	~	~	~	~	~	~	~	~
		3/15/22				2,831.89	2,831.89	285,400.56
24	12	6/15/22	43,886.16	5,351.26	38,534.90	2,831.89	46,718.05	246,865.66
		9/15/22				2,449.52	2,449.52	246,865.66
25	13	12/15/22	43,886.16	4,628.73	39,257.43	2,449.52	46,335.68	207,608.23
		3/15/23				2,059.99	2,059.99	207,608.23
26	13	6/15/23	43,886.16	3,892.65	39,993.51	2,059.99	45,946.15	167,614.73
		9/15/23				1,663.16	1,663.16	167,614.73
27	14	12/15/23	43,886.16	3,142.78	40,743.38	1,663.16	45,549.32	126,871.35
		3/15/24				1,258.88	1,258.88	126,871.35
28	14	6/15/24	43,886.16	2,378.84	41,507.32	1,258.88	45,145.04	85,364.02
		9/15/24				847.02	847.02	85,364.02
29	15	12/15/24	43,886.16	1,600.58	42,285.58	847.02	44,733.18	43,078.44
		3/15/25				427.45	427.45	43,078.44
30	15	6/15/25	43,886.16	807.72	43,078.44	427.45	44,313.61	0.00
		6/15/25	**1,316,584.79**	**316,584.79**	**1,000,000.00**		**1,651,658.13**	

In a supplemental interest tax credit structure, in addition to the principal, the issuer only pays the taxable supplemental interest. The purchaser/investor receives the benefit of being able to deduct the tax credit directly on their Federal taxes.

Case Study A

Yolo County, CA

QECBs, CREBs, and Tax-exempt Lease

$4,800,000

Yolo County, CA

QECBs, CREBs, and Tax-exempt Lease

Solar Photovoltaic System

Overview:

- Yolo County, California is located in the southwestern Sacramento Valley, approximately 60 miles northeast of San Francisco and adjacent to Sacramento, the capital of the state.
- Banc of America Public Capital Corp's Energy Services team provided $4.8MM in financing to Yolo County for a 1-megawatt solar photovoltaic system.
- Design and construction of the solar photovoltaic system will be completed by SunPower for installation at the Yolo County Justice Center in Woodland, California. Yolo County will own the system and the associated renewable energy credits.
- Financing for the project will consist of multiple sources including Clean Renewable Energy Bonds (CREBs) and Qualified Energy Conservation Bonds (QECBs) available through the American Recovery and Reinvestment Act of 2009.

Client Benefit:

- The project is expected to generate an aggregate energy savings of $8.6MM in excess of the debt service for a life of up to 25 years which is approximately 10 years after the maturity of the credit facility.
- In addition to this financing, SunPower assisted Yolo County in securing a 15-year loan from the California Energy Commission. This is the first solar project to make use of the federal stimulus legislation's CREBs, established in 2009, and among the first large-scale solar projects to be funded by a California Energy Commission loan.
- Yolo County is using the federal and state funding to save money, create jobs and produce clean energy.

Structure:

- Multiple funding sources:
  - $2.019MM in QECBs
  - $2MM in CREBs
  - $765K Tax-exempt Lease

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Case Study B

American Municipal Power
"Old" Clean Renewable Energy Bonds (CREBs)

$22,600,000

"Old" CREBs

Hydroelectric Generation Facilities

Overview:

- American Municipal Power (AM P), a nonprofit wholesale power supplier, serves 128 member municipal electric systems serving more than 570,000 customers in six states — Ohio, Pennsylvania, Michigan, Virginia, Kentucky and West Virginia.
- Banc of America Public Capital Corp's Energy Services team purchased $22.6 million in "Old" CREBs issued by AMP for a hydroelectric power project.
- The project consists of three run-of-the-river hydroelectric generation facilities located on the Ohio River. Each facility will divert water from an existing Army Corps of Engineers dam through bulb turbines, for a combined generation capacity of approximately 208 megawatts.

Client Benefit:

- The project represents an important part of AMP's strategy to reduce its reliance on purchased power.
- Hydroelectric generation facilities provide stable power generation at predictable costs and provide the ability to lock in a long-term, stable cost source of power thereby replacing purchased power needs. By investing in owned generation from hydroelectric sources, AMP can increase control over power costs.

Structure:

- $22.6MM purchased with an original issue discount in lieu of a supplemental coupon
- 16-year term

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Program Challenges

- Overcoming myths of programs, such as lack of use and unsuitability
- Education and politics
- Small allocations
- Marrying tax credit bonds with other sources of financing
- QECBs: state application process

Questions?

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