Financing of Utility Energy Efficiency Loans

EUEC 2012

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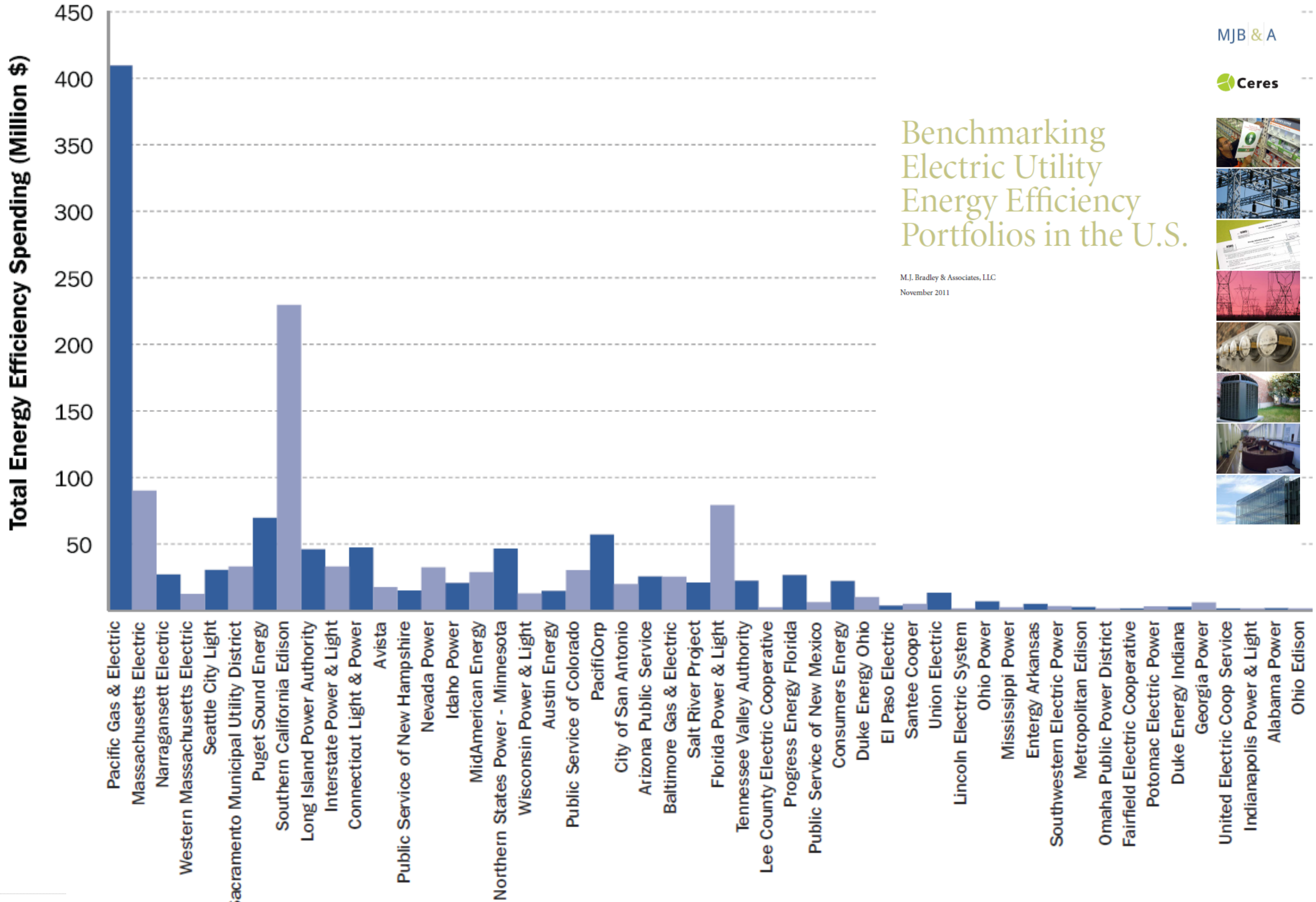
UTILITIES PLAY A CENTRAL ROLE IN EE FINANCING – FROM $5 BILLION IN 2009 TO $12 BILLION BY 2020



Source: “Benchmarking Electric Utility Energy Efficiency Portfolios in the U.S.,” Ceres/MJB&A, 2011.

MA 3-YEAR EE PLAN

- $1.3 billion from 2010-2013
- Covers all sectors, with carveouts for individual programs
- 60% C&I, 29% residential, and 11% low income
- Outside funding to grow from $836K to $120MM
- Outside sources to include “traditional lending sources, such as banks, or non-traditional sources, such as retailers and other private entities, with the Program Administrators acting to bring customers together with lenders in order to affect a loan for an energy efficiency project. Outside capital might also be raised through the sale of tax-exempt bonds or other government initiatives.” – or grants - - basically anything the utilities can dig up

Table 3a: Statewide Program Budgets, by Sector ($)

Sector/Program	2010		2011		2012		2010-2012	
	$	%	$	%	$	%	$	%
Residential								
Programs								
New Construction & Major Renovation	3,690,980	4	4,089,757	3	4,528,422	3	12,309,159	3
Cooling & Heating Equipment	4,672,370	5	5,954,176	5	7,937,126	5	18,563,672	5
Multi-Family Retrofit	13,065,701	13	18,045,733	15	21,447,418	15	52,558,853	14
MassSAVE	38,089,203	39	48,861,802	40	58,817,455	40	145,768,461	40
O Power	1,215,345	1	1,585,051	1	2,630,879	2	5,431,276	1
Energy Star Lighting	16,577,477	17	17,984,939	15	22,012,984	15	56,575,401	15
Energy Star Appliances	5,203,850	5	6,164,059	5	6,845,833	5	18,213,743	5
Programs Total	82,514,928	85	102,685,518	84	124,220,118	84	309,420,564	84
Pilot Programs Total	3,415,730	4	3,693,267	3	3,419,239	2	10,528,237	3
Hard-to-Measure Initiatives Total	10,895,214	11	15,743,066	13	19,613,027	13	46,251,307	13
Residential Total	**96,825,872**	**100**	**122,121,851**	**100**	**147,252,384**	**100**	**366,200,107**	**100**
Low-Income								
Programs								
New Construction	1,126,588	3	1,337,289	3	1,672,054	3	4,135,930	3
1-4 Family Retrofit	19,155,231	53	23,958,622	50	33,503,285	55	76,617,137	52
Multi-Family Retrofit	15,171,945	42	21,793,974	45	24,545,143	40	61,511,062	42
Programs Total	35,453,763	97	47,089,884	97	59,720,482	98	142,264,129	97
Hard-to-Measure Initiatives Total	1,000,161	3	1,250,552	3	1,473,338	2	3,724,052	3
Low-Income Total	**36,453,924**	**100**	**48,340,436**	**100**	**61,193,820**	**100**	**145,988,181**	**100**
Commercial & Industrial								
Programs								
New Construction & Major Renovation	38,703,301	24	60,846,625	23	75,784,070	22	175,333,995	23
Large Retrofit	82,089,928	51	137,011,637	53	172,572,207	51	391,673,772	52
Small Retrofit	35,407,223	22	56,401,737	22	81,911,211	24	173,720,171	23
Programs Total	156,200,451	97	254,259,999	97	330,267,488	98	740,727,938	98
Pilot Programs Total	440,750	0	443,250	0	452,850	0	1,336,850	0
Hard-to-Measure Initiatives Total	3,907,996	2	6,085,673	2	7,654,939	2	17,648,608	2
Commercial & Industrial Total	**160,549,197**	**100**	**260,788,922**	**100**	**338,375,277**	**100**	**759,713,396**	**100**
Grand Total								
Residential Total	96,825,872	33	122,121,851	28	147,252,384	27	366,200,107	29
Low-Income Total	36,453,924	12	48,340,436	11	61,193,820	11	145,988,181	11
Commercial & Industrial Total	160,549,197	55	260,788,922	60	338,375,277	62	759,713,396	60
GRAND TOTAL	**293,828,994**	**100**	**431,251,209**	**100**	**546,821,481**	**100**	**1,271,901,684**	**100**

Source: MA DPU.

GOAL

Establish an externally-funded energy efficiency funding program that:

- Helps utilities meet their "outside capital" energy efficiency spending targets
- Fits within the regulatory context – DPU, DOER, GCA
- Achieves a competitive cost of capital
- Has low operating costs
- Is scalable, repeatable, and long-lasting
- Is technology/measure agnostic
- Is duration-matched to EE loans

Cracking the nut.

Initial problem: bank funding for EE is too costly

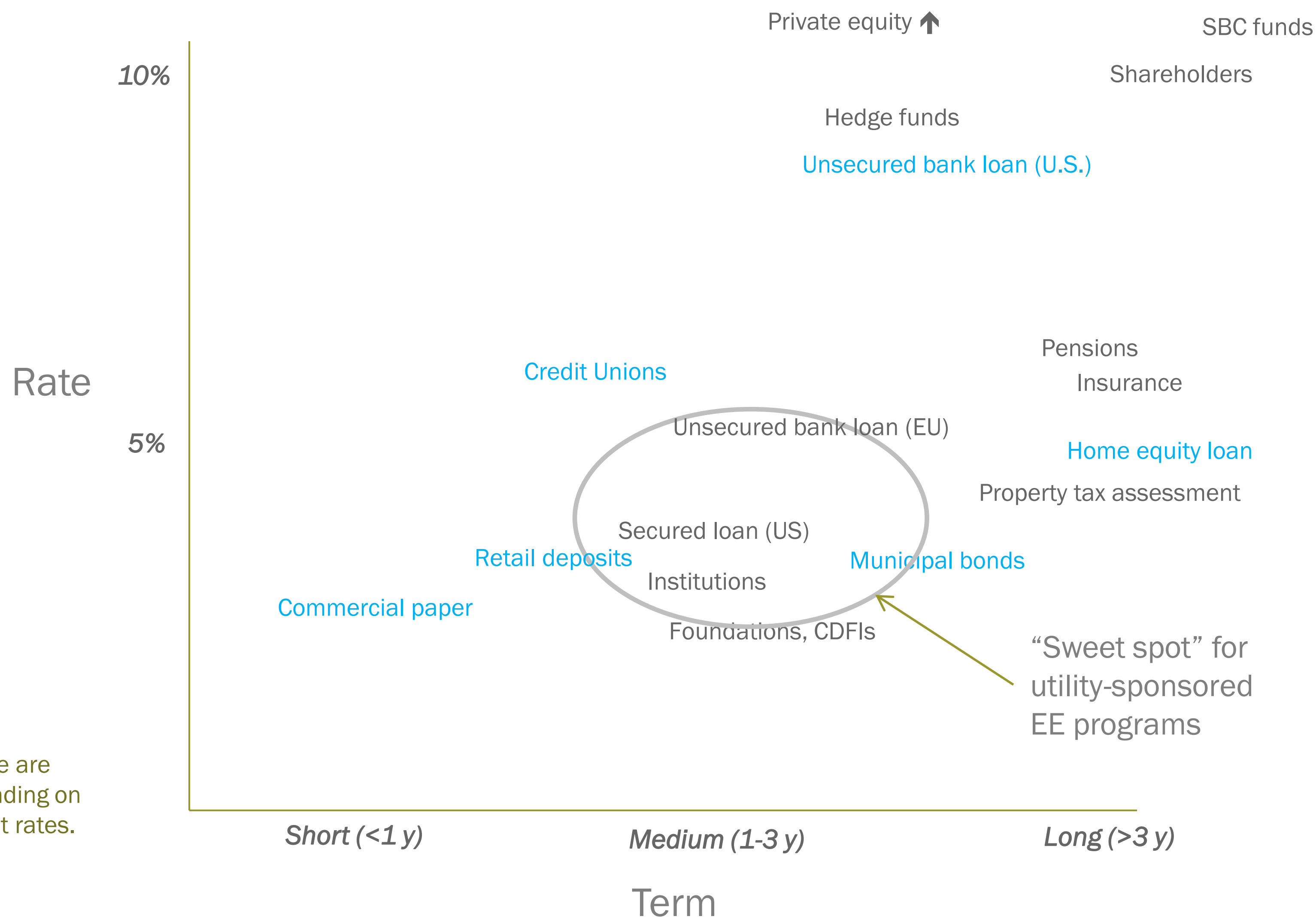
- Currently most bank funding flows to the “MUSH” sector – through ESCOs – or to residential borrowers
- Banks prefer clear disclosure of credit ratings
- Because of the muni focus, tax-exempt lending accounts for a large share of total bank energy efficiency lending
- Spreads for this type of lending are well within bounds:

	2006	2007	2008	2009	2010
Sample Spreads	1.20-1.80	1.50-2.00	3.00-3.75	4.00-4.75	2.75-3.50

Source: Bank of America

- **But** the same liquidity does not exist for the R/C/I efficiency markets
- Throw in regulatory restrictions and it gets even more difficult
- Bank quotes confirm this

Cost of capital for EE Funds



Sources in blue are variable depending on market interest rates.

Key Factors for...

Utility

- No credit checks
- Utility origination
- Utility EM&V
- On-bill repayment
- All sectors are fair play
- All measures are fair play
- Cheap
- Marketable to regulator
- 2-5 year term
- No prepayment penalties
- And yes...cheap

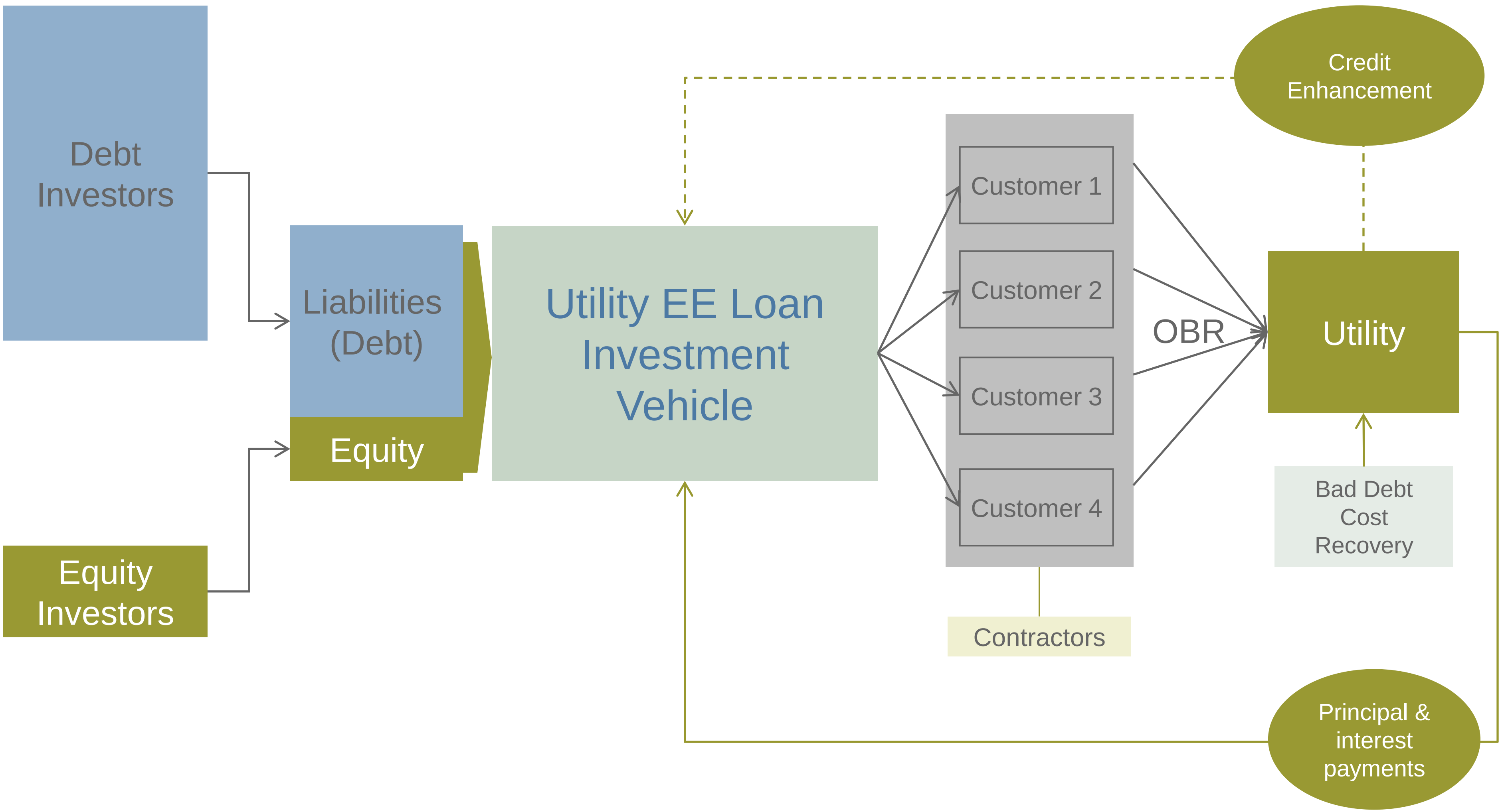
Investors

- Discoverable credit risk
- Transparent
- Repeatable/scalable
- Trusted servicer
- Choice of project types
- Reasonable risk-adjusted return
- Some form of recourse

Utility EE Loan Investment Vehicle

- Effort to create first-of-its-kind energy efficiency project financing vehicle – a proof of concept and an example for utilities in Massachusetts and around the country
- Scalable up and down – initial requirement is not too small, but fund could grow large and national in scope
- Brings a new, attractive class of investors – institutions – into program/project funding
- Sits off the balance sheet, away from the rate base
- Secures utilities and state a spot as innovators in energy efficiency finance
- Fixed rate, long term, discretionary source of funds
- Cost advantage – capital cost of 4-6%
- As secondary markets form, loans could be securitized and sold

Flows of money in the loan vehicle

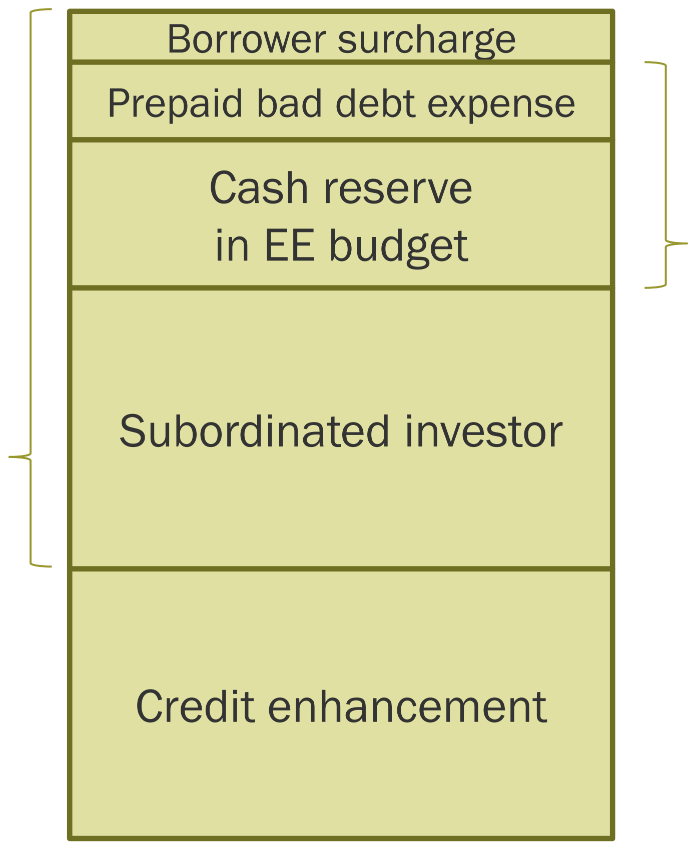


THE SIMPLE PROBLEM OF CREDIT

- Investors can't underwrite risk if the utility wants to manage originations
- Regulators won't approve a structure that pays investors to take unsecured risk
- Only the utility knows the customer

Sample $30 million loan fund

$20+ million of loss positions sit above the core credit enhancement



Initially, ~$4 million of ratepayer funds to secure capital for a $30 million loan pool

Potential pitfalls

We have interested investors, and utilities that need capital…BUT…

- Regulators may have unrealistic expectations about capital costs – did they create an unfundable mandate?
- Notion of building for the future seems to be lost – no long-term commitment to a structure, no concept of compromise to overcome hurdles now
- Utilities paralyzed by regulatory mandates, slow/unable to execute
- Investors may lose interest as the approval drags out to 2+ years

Where we hope to go next

- Negotiate structure
- Sort out pre-payment options
- Incorporate into next three-year plan for 2013-2015
- Get regulatory approval
- Modify data collection process – get credit proxies
- Then on to the next one

APPENDIX: SUMMARY OF ALTERNATIVES WE CONSIDERED

	A	B	C
Title	**Institutional ULIV**	**Wholesale loan conduit**	**Retail product**
Investors	endowments, foundations, pensions, insurance companies	large bank	retail investors
Vehicle	investment fund	ABCP-financed securitized receivables	CD
Example Potential Partners	Calvert Mission Markets	Southport Credit Agricole	Wainwright Bank Wells Fargo Credit unions
Structure	evergreen	conduit vehicle to purchase EE loans from NG after issuance can be used to refinance existing loans	design product and license to retail banks
Success Factors	educate institutional investors develop credit proxy based on payment history engage PRI investors first to prove concept find a low-cost structuring option	get access to customer data and enough payment history to serve as proxy for credit rating; pool loans to achieve diversification; keep it simple and transparent	identify a bank willing and able to manage retail marketing develop clear scope and messaging to consumers