



Financing Photo Voltaic (Solar Energy) Systems

**SD Housing Federation
Conference**

2007





Available Financing Mechanisms

- ✧ **Tax Credits**
- ✧ **Increased supportable debt from reduced tenant utility allowances**
- ✧ **Rebates & Grants**



Tax Credits

- ✧ **Federal Low Income Housing Tax Credits**
- ✧ **Business Tax Credit**



Housing Tax Credits (cont.)

- ✧ **TCAC regulations encourage developers to incorporate distributive energy technologies (PV Systems) in projects**
- ✧ **TCAC allows a 5% increase in threshold basis, which determines the maximum amount of tax credits a developer can request**



Housing Tax Credits (cont.)

- ✧ **The 5% threshold increase can create additional investor equity**
- ✧ **Project's eligible basis (construction and construction related costs) must exceed the threshold basis limit before the 5% adjustment to create additional equity**
- ✧ **Otherwise, decide to include a PV system if it makes economic sense, but do not check the box for TCAC or CDLAC requiring incorporation of these technologies**



Business Tax Credit

- ✧ **Thirty Percent Business Tax Credit**
 - Project must Place in Service in 2008
 - Otherwise, Business Tax Credit is Ten Percent
- ✧ **Available to businesses that invest or purchase qualified solar energy systems**
 - Tax credit taken in the first year of operations
 - Tax credit is only available on the portion of the cost that is not covered by rebates or grants
 - Business Tax Credit must be reduced from eligible basis if combining with Low Income Housing Tax Credits
- ✧ **May require educating your tax credit investor**



Business Tax Credit - Accelerated Depreciation

- ✧ **Accelerated depreciation (5 years vs. 15 years) is available on the depreciable basis of PV system on the portion of the cost that is not covered by rebates or grants**
- ✧ **Available to businesses that invest or purchase qualified solar energy systems**



Sample Project with PV

- ✧ **Community Road, City of Poway in San Diego County developed by Community Housing Works**
- ✧ **New construction of 56 units of large family housing**
- ✧ **Plans to install a 141 kW solar photo voltaic solar system that will generate enough electricity for the entire project**



Project Financing

- ✧ **Conventional bank financing**
- ✧ **Public agency residual receipts loans**
- ✧ **Federal Low Income Housing Tax Credits (9%)**
- ✧ **Business Tax Credit (30%), rebates, and grants for solar energy**

PV Sources and Uses

<u>Total Cost</u>		<u>Total Sources</u>	
Base Cost	967,522	Housing Tax Credits	405,003
GC Stack*	135,453	Business Tax Credits	208,011
		Additional Debt	130,000
		CEC Rebate	409,605
	=====		=====
TOTAL	1,102,975		1,152,619
		Surplus/(Gap)	49,644

*14% for general contractor mark up, insurance, bonds, prevailing wage

Housing Tax Credit - 5% Adjustment

TCAC BASIS LIMIT FOR THIS PROJECT			
Unit Type	# Units	Per Unit Basis Limit	TOTAL
0 BR	0	92,324	0
1 BR	8	106,451	851,608
2 BR	30	128,381	3,851,430
3 BR	18	164,329	2,957,922
	56		7,660,960
Additional Basis Adjustments:			
			654,564
			1,532,192
			306,438
			383,048
TOTAL THRESHOLD BASIS LIMIT*			10,537,202
TOTAL ELIGIBLE BASIS			12,789,499
Over (Under)			2,252,296



Housing Tax Credit (cont.)

- ✧ **The 5% increase in Threshold Basis for renewable energy technology is \$383,048**
- ✧ **Investor purchases the housing tax credits at \$1.04**
- ✧ **Results in \$405,003 in investor equity***
 - *After to 130% DDA boost, 2% credit reduction, and 7.98% credit rate, per TCAC 2005 regulations

Business Tax Credit

Total PV Depreciable Basis	1,102,975
less: Grants/Rebates	(409,605)
Basis for Business Tax Credit	693,370
Credit Percentage	30%
Total Business Tax Credit	208,011
Investor purchases for \$1.00/credit	208,011



Business Tax Credit (cont.)

- ✧ **Investor purchases the business tax credit at \$1.00 per credit**
- ✧ **Results in \$208,011 in additional investor equity**
- ✧ **Business Tax Credit must be subtracted from eligible basis when calculating the Housing Tax Credits**
- ✧ **Also, the depreciable basis for the housing tax credit is depreciated on a faster schedule, increasing the internal rate of return to the investor**



Additional Supportable Debt

- ✧ **The owner's operating budget line item for common area electricity may be reduced to zero (depending on the system's capacity)**
- ✧ **Tenant Utility Allowances for electricity may be reduced to zero**
- ✧ **The above savings are off-set by a \$10 per unit per month Interconnection Fee paid to utility company**
- ✧ **The above changes increase the amount of supportable debt provided by the permanent lender. May require convincing lenders.**





Additional Supportable Debt (cont.)

- ✧ **Approximately \$130,000 in additional debt can be supported from the electricity savings**
- ✧ **Conventional lenders usually incorporate the utility allowance savings into the loan amount**
- ✧ **Specialized energy investment firms can provide subordinated debt products to leverage the electricity savings**



Additional Information

**California Housing
Partnership Corporation**

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