

***Making the Numbers
Work for Solar PV
Systems***

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Presentation Outline

- **Solar Financing Resources**
- **Solar Financing Example**
- **Current Market Information**
- **Solar Financing Challenges for Acquisition/Rehab & Existing Projects**





Solar Financing Resources

- **Federal Low Income Housing Tax Credits**
- **Solar Credits**
- **Rebates/Grants**
- **Increased Project Debt**
- **Accelerated Depreciation**





Low Income Housing Tax Credits

- **The California Tax Credit Allocation Committee (TCAC) is the state agency that allocates Federal Low Income Housing Tax Credits (LIHTC's) to eligible affordable housing projects in California.**
- **TCAC regulations encourage developers to include renewable energy systems (solar) in their projects by giving these projects a basis increase equal to the lesser of (a) the net cost (cost net of rebates) of the energy system or (b) 5% of the total basis limits**



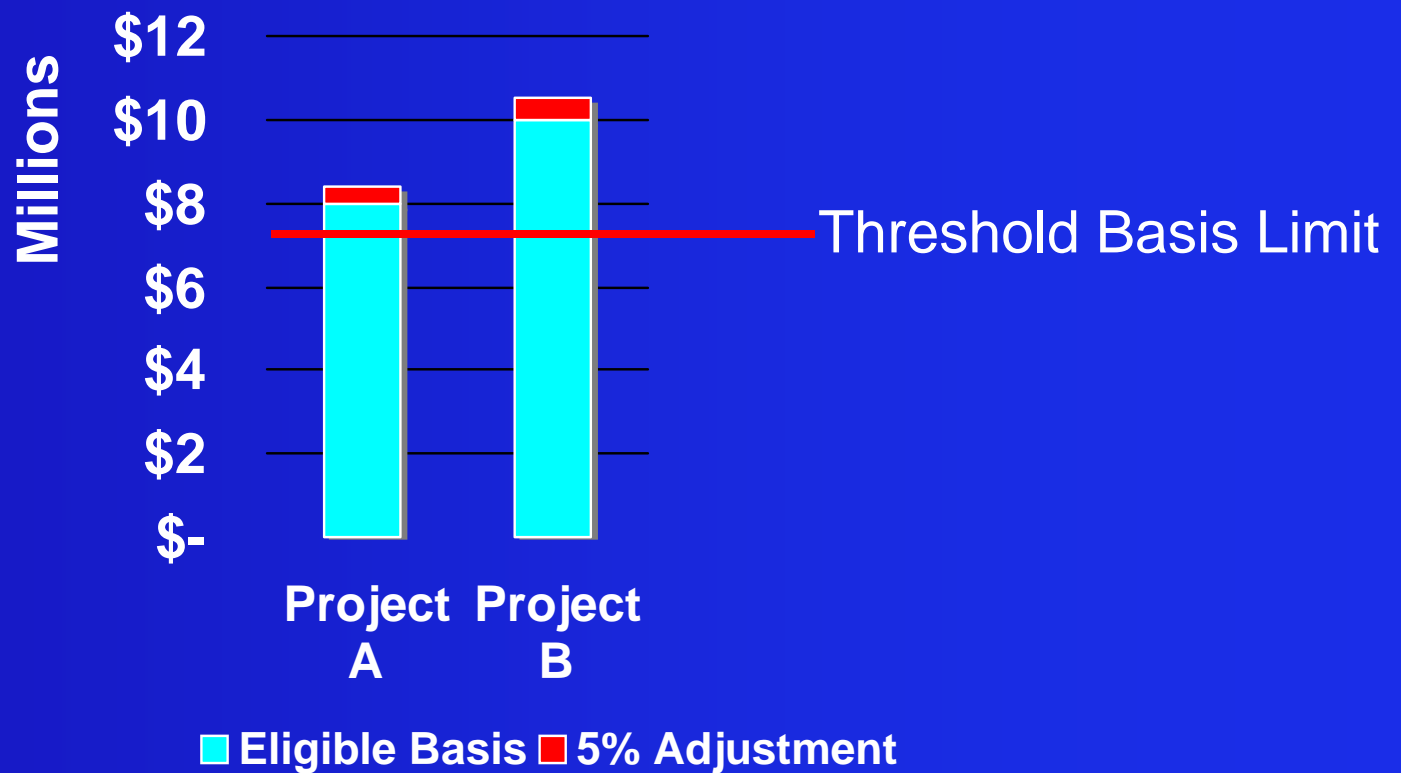


Low Income Housing Tax Credits

- ✧ The 5% basis increase creates additional investor equity which can be used to finance a project's solar energy system
- ✧ A project's eligible basis (construction and construction-related costs) must exceed the threshold basis limit in order for the 5% basis adjustment to create additional equity



5% Basis Limit Boost





Solar Credits

✧ 30% Federal Tax Credit

- Available to projects which place in service by the end of 2016
- Original authorization of the 30% credit sunset in 2008. Reauthorization through 2016 occurred at the end of 2008.
- Per ARRA, solar credits can now be taken as a grant! Eligible projects must PIS or begin construction in 2009 or 2010



Solar Credits

- ✧ Available to corporations that invest or purchase qualified solar energy systems
 - The 30% credit is taken entirely in the first year of operations
 - 50% of the solar credit must be reduced from eligible basis, if combining with LIHTC's
 - 4% bond deals no longer need to reduce basis by the private activity bond contribution
 - If the rebate comes from the manufacturer of the system, credit basis must be reduced by the rebate amount



Rebates & Increased Debt

- ✧ **Rebates & Grants:** Provided from federal/state government or local utility providers. They can also come directly from manufacturers.
- ✧ **Debt:** Solar PV systems that reduce tenant-paid utility costs may be eligible for reduced utility allowance rates. Lower utility allowances translate into higher rental income (and therefore higher debt capacity). Additional debt can then be used to finance the PV system. Reductions in common area utility costs also increase debt capacity.



Accelerated Depreciation

- ✧ Accelerated depreciation is available on the portion of the solar system costs that are not covered by rebates or grants
- ✧ 5 years for LP and 12 years for GP depreciation may be used instead of 27.5 and 40 year depreciation schedules, respectively





Solar PV Example - Sources & Uses


<u>Total Cost</u>		<u>Total Sources</u>	
Cost	200,000	Housing Tax Credits	-
		Solar Credit	30,000
		Additional Debt	-
		Rebates	<u>75,000</u>
	<u>200,000</u>		105,000
TOTAL		Surplus/(Gap)	(95,000)



Solar PV Example - Tax Credit Calculation

<u>Total Solar Depreciable Basis</u>	200,000
Less: Grants/Rebates	(75,000)
Less: Basis/Bond Reduction	-
Basis for Solar Credit	125,000
Credit Percentage	<u>30%</u>
	37,500
Credit Pricing	\$ 0.80
Investor Credit Purchase	30,000






Solar PV Example - Financing Specifics

✧ Solar Credit Example includes the following:

- No 5% threshold basis boost: Project is below basis limits
- A 30% tax credit is taken on costs not paid by rebates/grants and purchased by the investor for \$0.80 per credit (\$30,000 total)
- No increase in debt capacity is assumed
- Rebates are provided from manufacturer so reduce solar credit basis






Solar PV Example - Financing Specifics

✧ Solar Credit Example includes the following:

- A reduction in basis based on the private activity bond financing is no longer required. Show \$0 deduction in example.
- A reduction in LIHTC basis equal to 50% of the solar credit will be applied, since LIHTC's are accessed. This is not relevant to non-LIHTC deals.





Solar PV Example - Financing Specifics

✧ Depreciation & Rebates

- Most projects receive increased debt capacity as a result of the installation of a common area PV system. One recent project I worked on saved 12k in electricity costs and 10k in hot water costs annually. This translated into a 70k increase in debt capacity.
- The project will receive accelerated depreciation on system costs not paid for by rebates/grants. This front-loads tax benefits which will increase tax credit pricing






The Current Market

✧ **Recent Regulatory Changes**

✧ **Investor Interest**





The Current Market (Regulations)

What has changed over the last year?

- The IRS no longer requires the application of the private activity bond reduction to the solar credit calculation. This increases the amount of earned credit substantially.
- Clarification on rebates: If provided by a third party, rebates don't reduce basis and will instead be shown as income during the project's first year of operations. Haven't tested this yet.

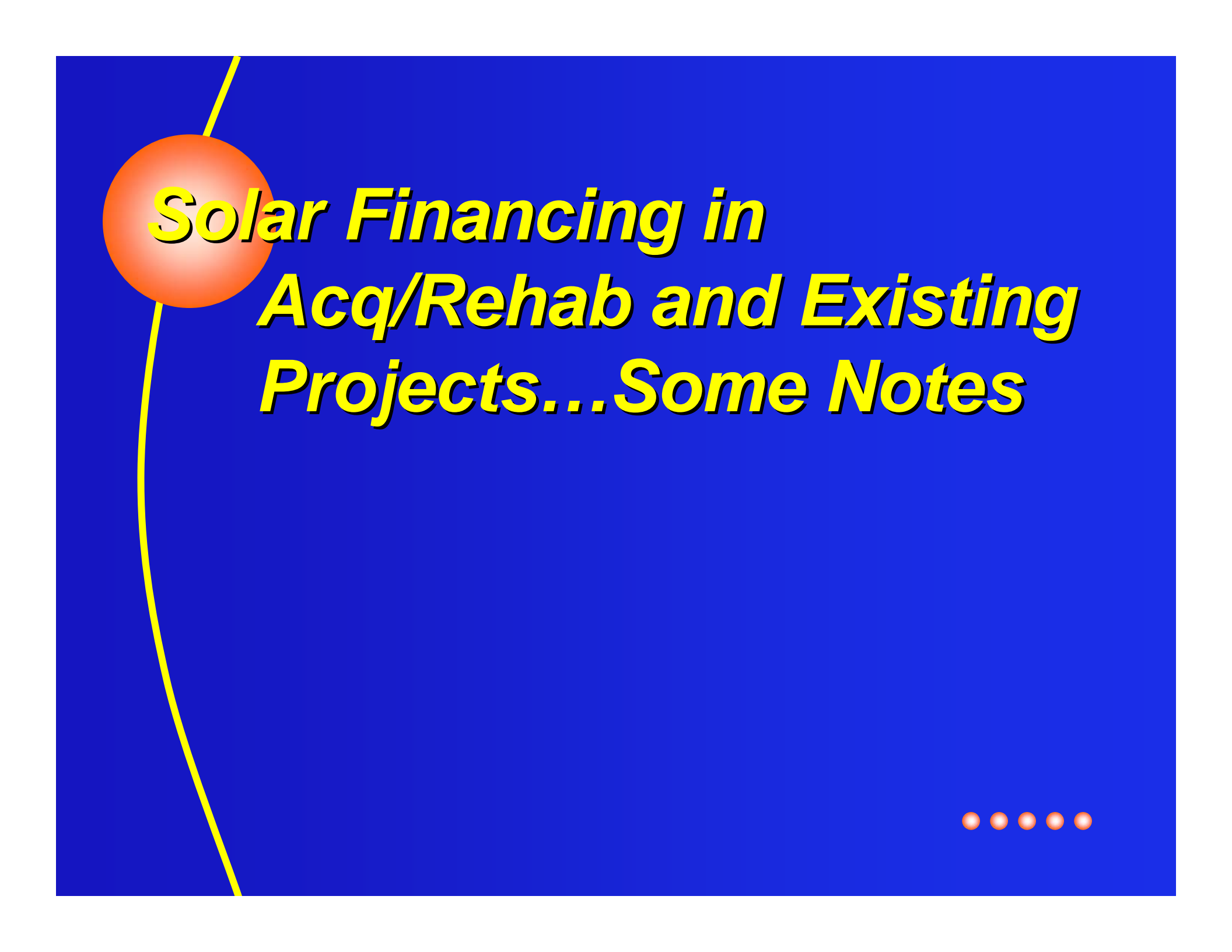




The Current Market *(Investor Interest)*


- ✧ Over the last several years, projects have had little trouble syndicating solar credits on LIHTC deals
- ✧ Investors either pay for the credits separately (cents on the dollar) or roll them into the IRR and price them with the LIHTC's
- ✧ THE ARRA grant provisions will insure projects access solar credit funding through 2010.
- ✧ Rare to see solar credits on non-LIHTC deals. The current ARRA grant program does allow non-LIHTC deals to access this financing source.





***Solar Financing in
Acq/Rehab and Existing
Projects...Some Notes***





Acq/Rehab and Existing Project Notes

- **The TCAC basis boost is only effective on projects which access the LIHTC program and are ABOVE the TCAC basis limits**
 - This typically only includes 9% deals as Acq/Rehab deals accessing LIHTC's are typically below the basis limits and therefore can't access the 5% basis boost/equity increase
 - Existing projects (projects which are not undergoing major rehab work/refinancing) aren't accessing credits so are ineligible for the 5% basis boost/equity increase



Acq/Rehab and Existing Project Notes

- Like new construction deals, these projects can also access the increased debt capacity that coincides with the addition of renewable energy systems
- Rebates will be identical.
- Depreciation benefits will also be identical and will benefit the deal if the project is syndicated. Non-syndicated deals will not benefit from this.



Acq/Rehab versus Existing Project Notes

- ✧ Acquisition/Rehab deals are likely to fare better than existing deal financings since they are in the midst of originating new financing. Other financing sources can therefore subsidize the solar system gap.
- ✧ Acquisition/Rehab deals typically access LIHTC's. Existing projects don't. It is hard to sell solar credits independent of LIHTC's. The ARRA grant program may change this.
- ✧ Realistically, then, existing projects can only benefit from rebates and increased debt capacity. There will be a large financing gap.

