

Solar Installations for Development Projects: Emerging Legal Issues

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Interest in Solar Seems to Be Everywhere . . .



Government Focus on Solar Is Growing

Federal Focus on Solar

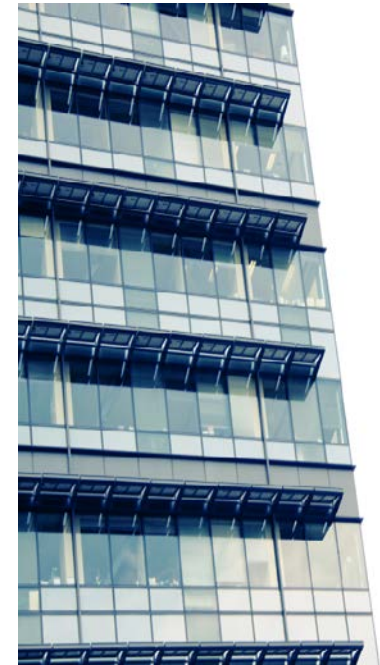
- ▶ President Obama has set a goal to double U.S. renewable energy production, including solar energy production, in three years.
- ▶ Congress has provided incentives for businesses and homeowners to buy solar power equipment as part of the stimulus package.



Government Focus on Solar Is Growing

State Focus on Solar

- ▶ The Scoping Plan for the California Global Warming Solutions Act of 2006 (Assembly Bill 32) identifies solar installations as a key measure to reduce greenhouse gas emissions.
- ▶ Governor Schwarzenegger's Million Solar Roofs Program sets a goal to install 3,000 megawatts of new solar capacity by 2017.



Regulatory Requirements for Solar

State Requirements for Solar

- ▶ Senate Bill 1 (“SB 1”): Requires solar options for certain residential developments.
- ▶ Solar Rights Act: Limits the restrictions on solar installations that real property instruments can contain.
- ▶ California Environmental Quality Act (“CEQA”): The California Attorney General, state and local agencies, and the courts have addressed using solar installations as mitigation to reduce significant impacts for greenhouse gas emissions.

SB 1: Solar Options for Homebuyers

Scope of SB 1

SB 1 (2006) requires developers to offer homebuyers options to purchase solar installations when:

1. The development project includes 50 or more single-family residences that are intended or offered for sale; and
2. The tentative subdivision map for the development project is deemed complete on or after January 1, 2011.

(Cal. Pub. Res. Code § 25405.5.)



SB 1: Solar Options for Homebuyers

Required Disclosures

When developers offer homebuyers the option to purchase solar installations, they must disclose:

1. The total cost of the solar installation.
2. The estimated cost savings associated with the solar installation, as determined by the California Public Utilities Commission.



SB 1: Solar Options for Homebuyers

Offset Alternative

- ▶ Developers can choose not to offer homebuyers the option to purchase solar installations and can still comply with SB 1 by installing solar energy systems that generate specific amounts of electricity on other projects, such as:
 - ▶ Low-income housing,
 - ▶ Multifamily housing,
 - ▶ Commercial development,
 - ▶ Industrial development, and
 - ▶ Institutional development.
- ▶ Compliance with SB 1 cannot substitute for implementing existing energy efficiency measures already required by law.

Solar Rights Act: Limits on Solar Restrictions

Scope of Solar Rights Act

- ▶ The Act prohibits including provisions in “any deed, contract, security instrument, or other instrument affecting the transfer or sale of, or any interest in, real property” that restrict solar installations in ways not permitted by the Act.
- ▶ Although the Act does not explicitly state that this prohibition applies to leases, a cautious reading suggests that this prohibition covers residential, commercial, and industrial leases.



(Cal. Civ. Code § 714(a).)

Solar Rights Act: Limits on Solar Restrictions

The Act Covers Common Interest Developments

- ▶ Assembly Bill 1892 (2008) clarified that the Act applies to governing documents of a common interest development.
- ▶ California Civil Code section 1351(c) defines a common interest development as: (1) a community apartment project, (2) a condominium project, (3) a planned development, or (4) a stock cooperative.



Solar Rights Act: Limits on Solar Restrictions

The Act Allows Reasonable Restrictions

- ▶ Although the Act prohibits outright restrictions on solar installations, it does allow “reasonable restrictions.”
- ▶ “Reasonable restrictions” are “those restrictions that do not significantly increase the cost of the system or significantly decrease its efficiency or specified performance, or that allow for an alternative system of comparable cost, efficiency, and energy conservation benefits.”
- ▶ The Act does not explain what makes an alternative system “comparable.”

(Cal. Civ. Code § 714(a)-(b).)

Solar Rights Act: Limits on Solar Restrictions

Quantitative Standard for Photovoltaic Systems

- ▶ For photovoltaic systems, the Act quantifies “restrictions that do not significantly increase the cost of the system or significantly decrease its efficiency.”
- ▶ Restrictions can increase the cost of the system by no more than \$2000.
- ▶ Restrictions can decrease the performance of the system by no more than 20%.



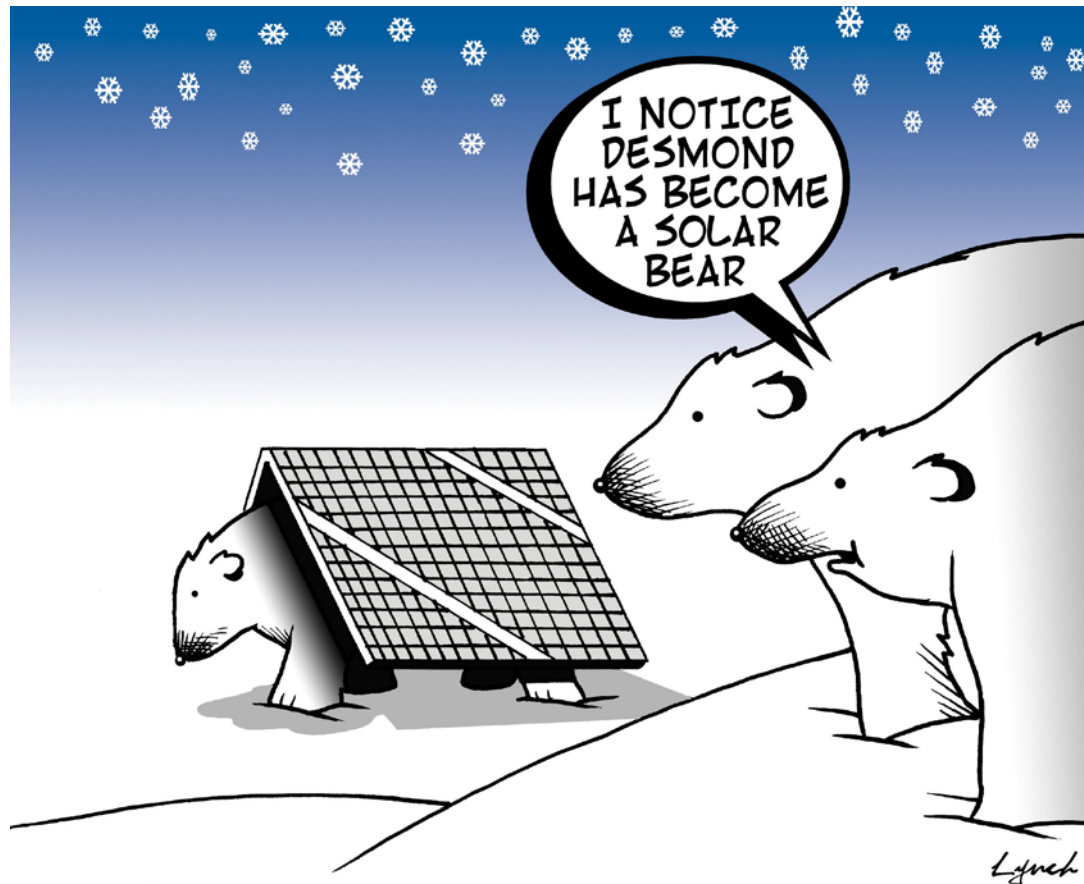
(Cal. Civ. Code § 714(d)(1)(B).)

Solar Rights Act: Limits on Solar Restrictions

Court Guidance on Reasonable Restrictions

- ▶ The California Court of Appeal provided some insight on what restrictions are reasonable in *Palos Verdes Association v. Rodman*, 182 Cal. App. 3d 324 (Ct. App. 1986).
- ▶ The court ruled that a homeowners' association could require a homeowner to replace passive solar water heaters, which can extend above the roof surface, with active solar water heaters, which have a lower profile on the roof and which are similar in cost and performance.

Solar Mitigation for Greenhouse Gas Emissions



Solar Mitigation for Greenhouse Gas Emissions

CEQA Requires Analysis of Greenhouse Gas Emissions

- ▶ CEQA requires an agency to analyze whether a development project's environmental impacts will be significant.
- ▶ The Office of Planning and Research (“OPR”) is currently drafting CEQA Guidelines for analyzing and mitigating impacts for a project's greenhouse gas emissions.
- ▶ The California Air Resources Board (“CARB”) is also working on significance thresholds that agencies can use to analyze impacts for a project's greenhouse gas emissions.

Solar Mitigation for Greenhouse Gas Emissions

Energy Efficiency Factors into the Analysis

- ▶ Both OPR and CARB have identified energy efficiency as a factor for determining whether a project's impacts for greenhouse gas emissions will be significant.
- ▶ One way to improve a project's energy efficiency is to reduce a project's carbon footprint by using renewable energy sources, such as solar installations.
- ▶ Incorporating solar installations into a project may therefore help bring a project's impacts for greenhouse gas emissions below a level of significance.



Solar Mitigation for Greenhouse Gas Emissions

Solar as Mitigation for Significant Impacts

- ▶ If an agency determines that a project's impacts for greenhouse gas emissions will be significant, then the project must reduce or avoid the significant impacts if feasible.
- ▶ One way to reduce or avoid significant impacts is to adopt mitigation measures.
- ▶ Solar installations are often recommended as mitigation for significant impacts for greenhouse gas emissions.

Solar Mitigation for Greenhouse Gas Emissions

Sources of Recommended Solar Mitigation Measures

- ▶ California Attorney General's list of possible mitigation measures.
- ▶ OPR's technical advisory on CEQA and climate change.
- ▶ Greenhouse gas significance thresholds that agencies such as CARB, the California Energy Commission, and the South Coast Air Quality Management District are developing.

Solar Mitigation for Greenhouse Gas Emissions

Sources of Recommended Solar Mitigation Measures

- ▶ Local green building ordinances: Even if the ordinances establish voluntary programs, their proposed mitigation measures are still in play.
- ▶ Voluntary green building programs, such as Leadership in Energy and Environmental Design (“LEED”).
- ▶ California Air Pollution Control Officers Association’s (CAPCOA) white paper on CEQA and climate change, which surveys mitigation measures throughout the nation.



Solar Mitigation for Greenhouse Gas Emissions

Sources of Recommended Solar Mitigation Measures

- ▶ Mitigation measures that agencies and project opponents have suggested for other projects in the area.
- ▶ Mitigation measures that the California courts have addressed in CEQA challenges to other projects.



Solar Mitigation for Greenhouse Gas Emissions

One Court's Approach to Solar Mitigation

- ▶ In July 2008, the Los Angeles Superior Court held that the City of Arcadia's environmental review for a proposed shopping center was deficient under CEQA.
- ▶ The court found that the project would have significant impacts for air pollution due to emissions from the project's energy use and from vehicle trips for the project.
- ▶ The court faulted the project for not incorporating solar panels because they would have reduced fossil fuel consumption and associated emissions that degrade air quality.

Solar Mitigation for Greenhouse Gas Emissions

One Court's Approach to Solar Mitigation

- ▶ The project proponents argued that CEQA did not require it to install solar panels as mitigation because the installation would be infeasible based on added cost.
- ▶ The court rejected this argument:
 - ▶ “The mere fact that this is not typically done in an industry is not enough to make it infeasible. Nor is additional cost enough to avoid a mitigation; the additional cost must be sufficiently economically severe to be impractical.”

(Decision for *Arcadia First! v. City of Arcadia* and related case: L.A. Superior Ct., Nos. BS 108937 & 108923, July 23, 2008.)

Solar Mitigation for Greenhouse Gas Emissions

Legally Defensible Treatment of Solar Mitigation

- ▶ The increasing focus on solar as mitigation to reduce impacts for greenhouse gas emissions requires a project to address proposed solar mitigation thoroughly during the CEQA review process.
- ▶ A project should address all proposed mitigation measures, no matter how trivial or far-fetched they may seem.



Solar Mitigation for Greenhouse Gas Emissions

Legally Defensible Treatment of Solar Mitigation

- ▶ A project should document reasons for rejecting any proposed mitigation measures in the response to public comments for its CEQA document and in its findings for project approval.
- ▶ An agency can reject mitigation measures that the agency finds would be *ineffective* or *infeasible*.

Solar Mitigation for Greenhouse Gas Emissions

Documenting Ineffectiveness

- ▶ An agency's findings that mitigation measures will be ineffective should cite to technical evidence that the mitigation measures will do little to reduce impacts for greenhouse gas emissions.
- ▶ For example, a solar installation may be ineffective if the project's design provides insufficient surface area to support a solar energy system that generates appreciable amounts of solar energy.

Solar Mitigation for Greenhouse Gas Emissions

Documenting Infeasibility

- ▶ Under CEQA, reduced profits are not adequate grounds for finding that mitigations measures are infeasible.
- ▶ A finding of infeasibility based on cost should demonstrate that the cost is so high that no rational developer would go forward with the project.
- ▶ Public policy reasons can also serve as grounds for finding that mitigation measures are infeasible.



Solar Mitigation for Greenhouse Gas Emissions

Example of Public Policy Reasons for Infeasibility

- ▶ For a residential community located close to city transit and employment centers:
 - ▶ Requiring solar installations on all rooftops, carports, and parking areas for this community would increase the cost of buying homes in the community and thus frustrate the city's goal of providing housing that its residents can afford close to transit and employment centers.



Categories of Developers and Financing Structures

	Developer-Installed	Distributed Model	Utility Scale
Developer	Commercial, industrial & mixed use real estate developers	Solar energy developers providing power to existing improvements	Utility-scale energy generation developers
Approach	Install panels as part of larger improvement	Lease space at development and install panels for sale to owner or tenant	Produce energy for wholesale sale

Categories of Developers and Financing Structures

Developer-Installed

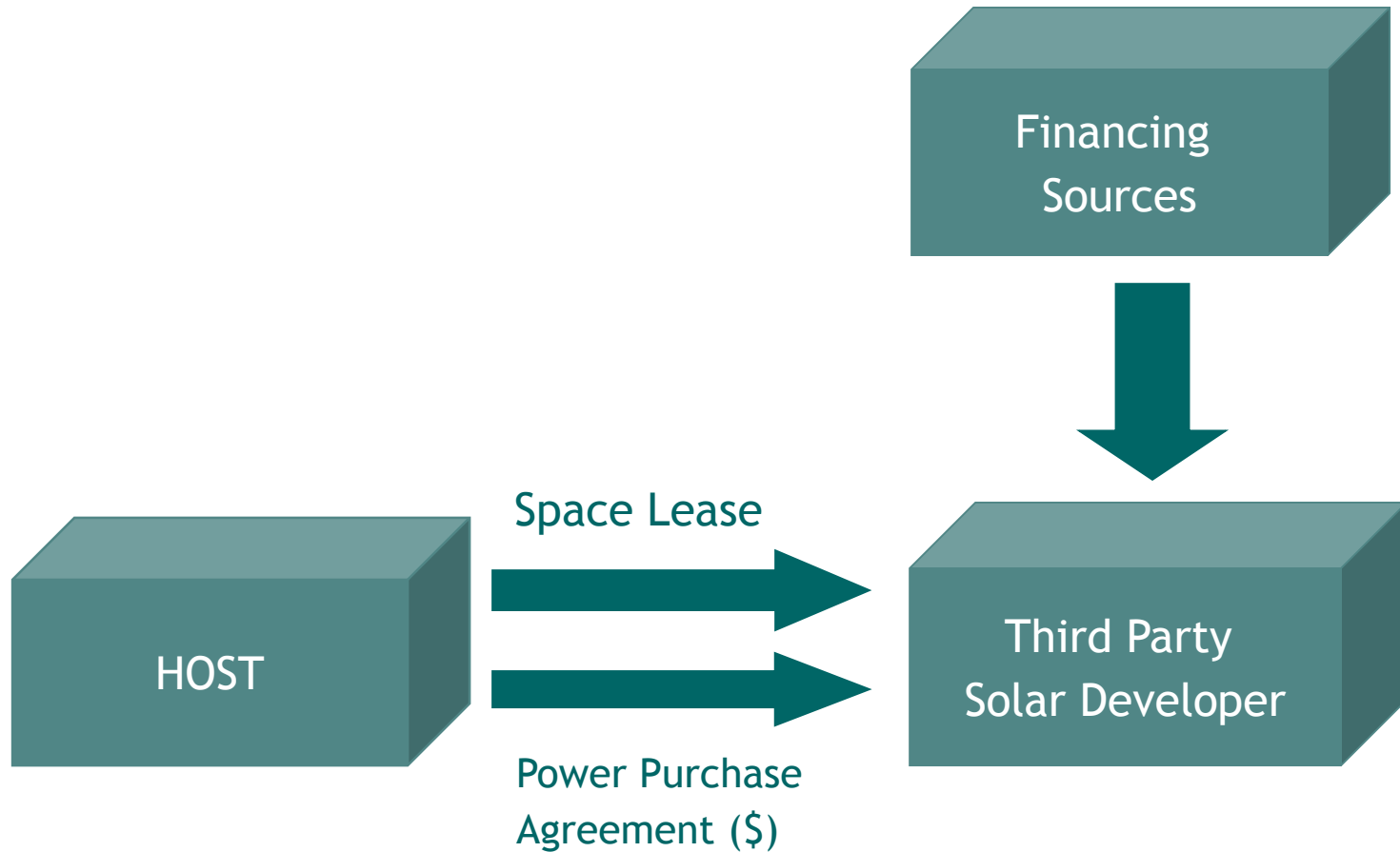
- ▶ Include cost in capital budget for development loan
- ▶ Stand-alone purchase money financing
- ▶ Finance through long-term equipment leasing arrangements
- ▶ With the recent passage of AB 811, there may now be a new option

Distributed Model

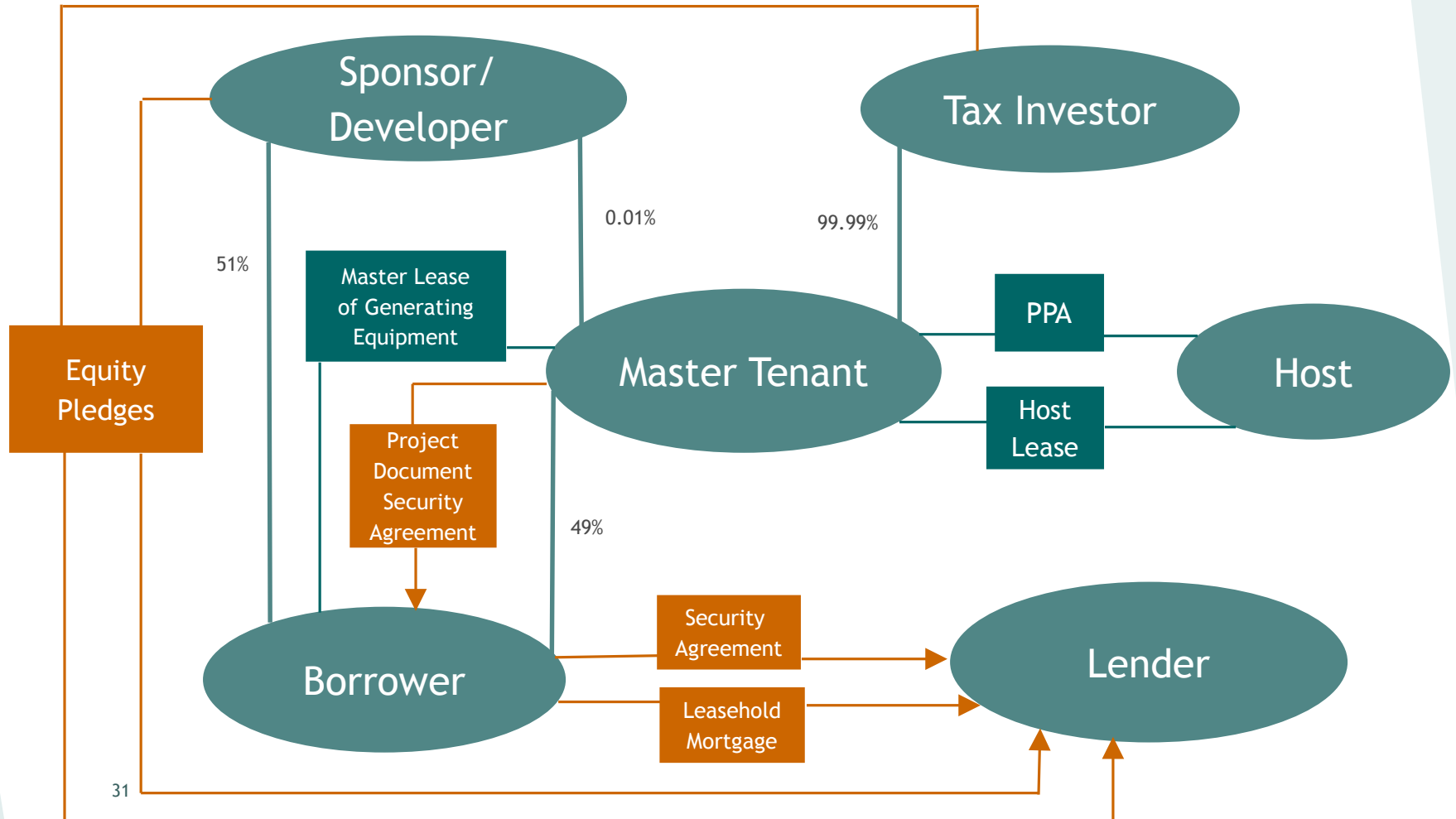
- ▶ Third party developer fronts installation cost and agrees to operate and maintain
- ▶ Third party developer obtains lease at project site and sells power back to the property through a long term PPA
- ▶ Power purchaser's credit is imperative to financeability

Both models benefit from government subsidies

Distributed Solar Model



Distributed Solar Model



Distributed Solar Model

Key Host Considerations

- ▶ Creditworthiness Analysis: financiers will bank on host's credit
- ▶ Long Term PPA
 - ▶ Host will be bound to a fixed price for energy over a long period
 - ▶ Good hedge against price increases but no relief if prices fall
 - ▶ Often generator is required to deliver only the energy actually produced
 - ▶ No remedies for failure to generate/deliver energy
 - ▶ Potential negotiating point
 - ▶ Renewable energy benefits
 - ▶ Generator usually takes government subsidies
- ▶ New Map Act Exception

Federal Incentives for Solar Energy



Energy
Credit



Cash Grants

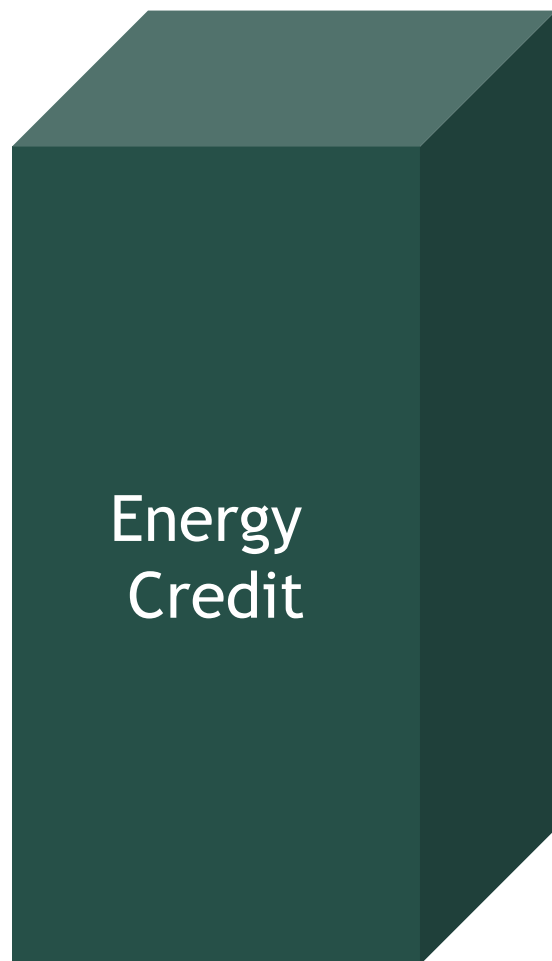


Depreciation



NOL Carryback

Federal Incentives for Solar Energy



- ▶ 30% credit based on the cost of qualifying solar energy property
- ▶ Credit is paid in the tax year property is first “placed in service”
- ▶ Must be placed in service by December 31, 2016
- ▶ Investor must retain ownership for 5 years or credits are subject to recapture
 - ▶ 20% of the credits vest per year

Federal Incentives for Solar Energy



Cash Grants

- ▶ Part of the 2009 Economic Stimulus Package
- ▶ Cash grant from the Secretary of Treasury of 30% of the basis of solar generating property
- ▶ Solar installation must be placed in service during 2009 or 2010; OR construction must begin during 2009 or 2010 and the installation must be placed in service by December 31, 2016
- ▶ Applications due by October 1, 2011
- ▶ Payment is made within the 60-day period beginning on the later of the application or placed-in-service date
- ▶ Grant is NOT taxed as income
- ▶ Grant is instead of the ITC (can't get both)

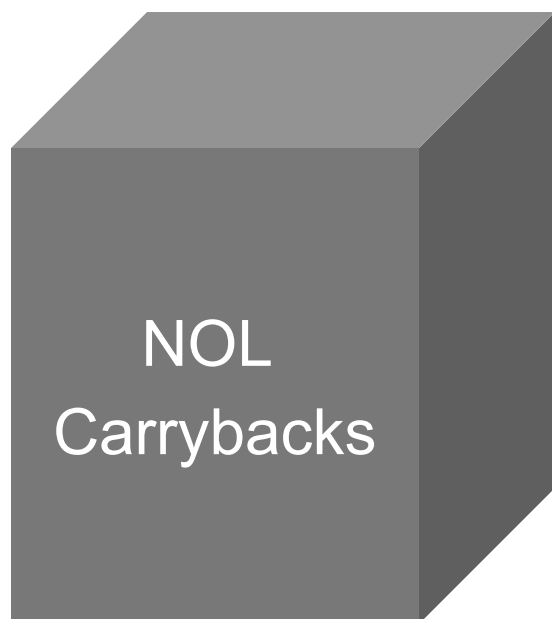
Federal Incentives for Solar Energy



Depreciation

- ▶ Solar facilities have a 5-year accelerated depreciation period
- ▶ 50% of the ITC or cash grant reduces the tax basis of depreciable solar property
 - ➔ only 85% of cost basis eligible for depreciation
- ▶ Depreciation Bonus
 - ▶ 50% bonus depreciation deduction in the taxable year the property is placed in service
 - ▶ If the ITC or cash grant payment is received, only 42.5% bonus permitted
 - ▶ Applies to property placed in service by certain dates

Federal Incentives for Solar Energy



- ▶ Carry back 2008 or 2009 NOLs for up to 5 years
 - ▶ NOLs include depreciation
- ▶ Available only to “small businesses” - gross receipts of less than \$15 million per year
- ▶ Usually NOLs can be carried back only 2 years

California Solar Initiative

Overview



- ▶ Effective as of January 2007, establishes incentives overseen by the CPUC for solar installations that provide generating capacity or displaced grid electric load to PG&E's, SCE's and SDG&E's ratepayers
- ▶ Budget of \$2.167 billion over the anticipated 10-year life of the program
- ▶ Goal: 1940 MW of solar capacity by 2016
 - ▶ 1750 MW under the general market program, which includes existing or new commercial, industrial, government, non-profit and agricultural properties, as well as some existing residential properties
 - ▶ 190 MW for low-income residential programs

California Solar Initiative

Overview *cont'd*



- ▶ Effective Dates: January 1, 2007 - December 31, 2016 (or until budget is fully committed)
- ▶ Monetary incentives payable up to the first MW of capacity for eligible solar installations between 1 kW and 5 MW
 - ▶ Installation cannot be sized larger than the needs of the host customer at the installation site (look to historical usage unless other evidence is provided)
 - ▶ Proration for installations larger than 1MW unless first MW is separately metered
- ▶ Eligible host customers: any “retail electric distribution customer” of the sponsoring utilities (including commercial, industrial, government, non-profit and agricultural properties)
 - ▶ Note that system owner does not need to be the host customer

California Solar Initiative

Select Eligible Installation Requirements

- ▶ Primarily targets PV installations, but also covers concentrating solar thermal and other technologies
 - ▶ Budget sub-caps for non-PV load displacing technologies (solar powered heating and air conditioning)
- ▶ Major components of PV system must be on the list of equipment certified by the CEC
 - ▶ Modules
 - ▶ Inverters
 - ▶ System Performance Meters
- ▶ Permanence Requirement
 - ▶ Physical Permanence: must be secured in accordance with industry practice for permanently installed equipment on a permanent surface; any indication of portability renders the installation ineligible
 - ▶ Must be permanently interconnected to the applicable IOU's electrical distribution grid
 - ▶ Contractual Permanence: “correspond[s] to a time period of 10 years” (CSI Handbook)

California Solar Initiative

Select Eligible Installation Requirements *cont'd*

- ▶ Warranty Requirement
 - ▶ Generating system must have a minimum 10-year no-cost repair or replacement warranty provided in combination by the manufacturer and the installer covering:
 - ▶ Defective workmanship
 - ▶ System or component breakdown
 - ▶ Degradation in electrical output of more than 15% over 10 years
 - ▶ Warranty period for meters that are separate from the inverter is 1 year

California Solar Initiative

Select Eligible Installation Requirements *cont'd*

► Redeployment Issues

- “In rare occasions, there may be extenuating circumstances that warrant equipment relocation. The Program Administrators will use their discretion whether to allow the relocation to continue to receive program incentives.” (CSI Handbook)
- If installation is removed within the 10-year warranty period, either:
 - It must be re-installed at another site within the applicable IOU’s service territory; or
 - The system owner will become ineligible to participate in the CSI Program for any additional installations, including active reservations that have not been paid
- If redeployment is a consideration, or financing depends on availability of CSI payments, thought may need to be given to warranty provisions to avoid inadvertent disqualification due to lapse of warranty in the event of redeployment

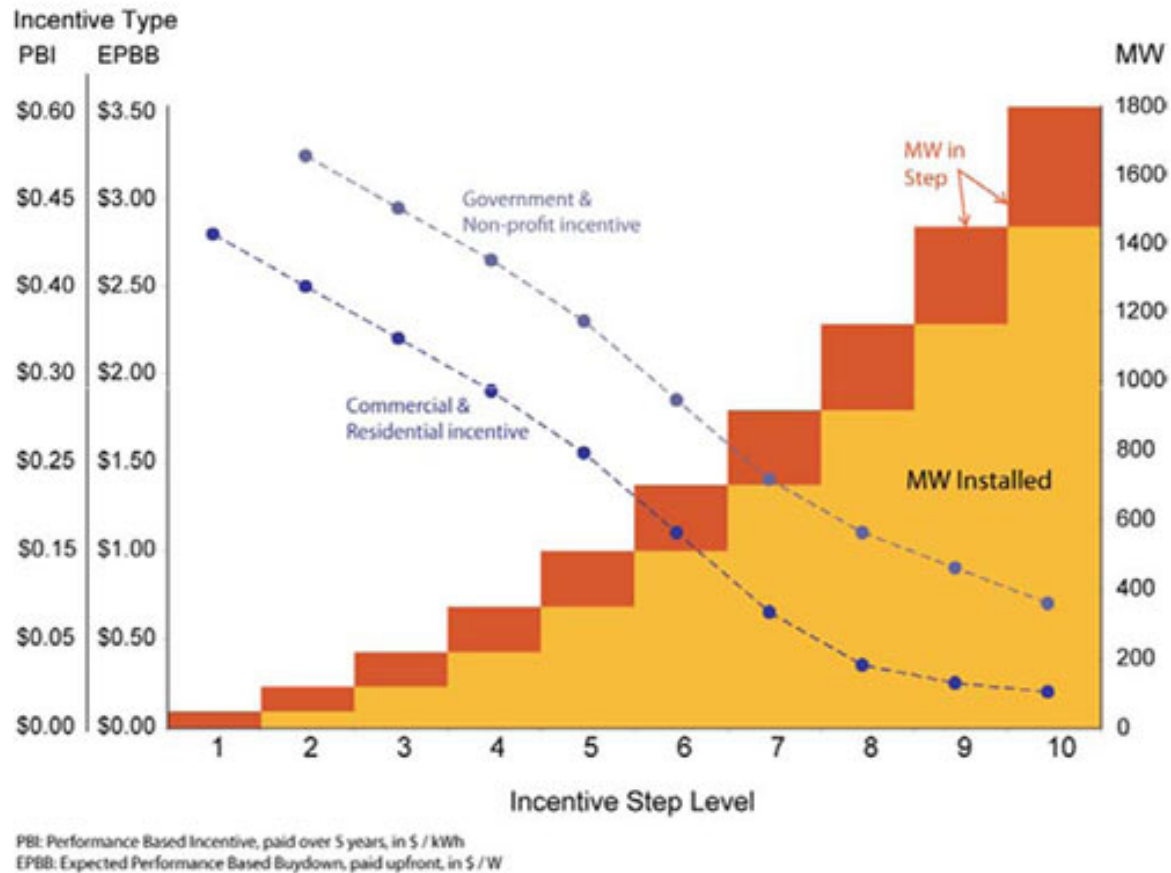
California Solar Initiative

Incentive Structure

- ▶ **Expected Performance Based Buydown (EPBB):** a one-time up-front incentive payment based on expected output
 - ▶ Small scale projects - no more than 50 kW, 30 kW after 2010
- ▶ **Performance Based Incentives (PBI):** incentives for solar projects paid monthly over a five year period based on the recorded power output
- ▶ Payment levels are reduced automatically in steps based on the volume of incentives reserved
- ▶ Total incentives received cannot exceed total project cost

California Solar Initiative

Incentive Step Levels



California Solar Initiative

Current Incentive Payment Levels

Step	MW in Step	EPBB Payments (per Watt)			PBI Payments (per kWh)		
		Residential	Non-Residential		Residential	Non-Residential	
			Commercial	Government/ Non-Profit		Commercial	Government/ Non-Profit
1	50	n/a	n/a	n/a	n/a	n/a	n/a
2	70	\$2.50	\$2.50	\$3.25	\$0.39	\$0.39	\$0.50
3	100	\$2.20	\$2.20	\$2.95	\$0.34	\$0.34	\$0.46
4	130	\$1.90	\$1.90	\$2.65	\$0.26	\$0.26	\$0.37
5	160	\$1.55	\$1.55	\$2.30	\$0.22	\$0.22	\$0.32 ³
6	190	\$1.10	\$1.10	\$1.85	\$0.15	\$0.15	\$0.26
7	215	\$0.65	\$0.65	\$1.40	\$0.09	\$0.09	\$0.19
8	250	\$0.35	\$0.35	\$1.10	\$0.05	\$0.05	\$0.15
9	285	\$0.25	\$0.25	\$0.90	\$0.03	\$0.03	\$0.12
10	350	\$0.20	\$0.20	\$0.70	\$0.03	\$0.03	\$0.10

- ▶ PG&E is at Step 5 for residential and Step 6 for non-residential
- ▶ SCE is at Step 3 for residential and Step 5 for non-residential
- ▶ CCSE (administrator for SDG&E) is at Step 4 for residential and Step 5 for non-residential

Regulatory Issues

- ▶ Issue in most cases is avoiding California retail regulation (as opposed to Federal wholesale regulation)
- ▶ Section 218 of the California Public Utilities Code
 - ▶ "Electrical corporation" includes every corporation or person owning, controlling, operating, or managing any electric plant for compensation
 - ▶ Exceptions include:
 - ▶ Electricity generated on or distributed by the producer through private property solely for its own use or the use of its tenants
 - ▶ Producing power from unconventional sources solely for:
 - ▶ Its own use or the use of its tenants
 - ▶ Use or sale to not more than two other corporations or persons on the real property where the electricity is generated or immediately adjacent thereto, unless there is an intervening public street
 - ▶ Certain exceptions apply

Regulatory Issues

- ▶ New exception from California retail regulation under Section 218 of the California Public Utilities Code effective January 1, 2009
 - ▶ "Electrical corporation" does not include an independent solar energy producer:
 - ▶ A corporation or person employing one or more solar energy systems (defined by reference to a single utility interconnection) for the generation of electricity for any one or more of the following purposes:
 - ▶ Its own use or the use of its tenants
 - ▶ Use or sale to not more than two other corporations or persons on the real property where the electricity is generated or immediately adjacent thereto
 - ▶ Eliminates the intervening public street limitation and certain other exclusions

AB 811: Public Financing for Solar

Financing Through Assessment Districts

- ▶ Assembly Bill 811 (“AB 811”) (2008) authorizes cities and counties to create assessment districts to provide owners of developed property with below-market financing for energy efficiency and renewable energy installations that are permanently fixed to their property.
- ▶ The city or county can obtain funds from any available source, including issuing bonds.

(Cal. Sts. & High. Code §§ 5898.12-5898.14 & 5898.20-5898.32.)



AB 811: Public Financing for Solar

Financing Availability to Developers

- ▶ AB 811 financing is available for developed property only.
- ▶ Developers who still own their property after developing it can still take advantage of AB 811 financing.



AB 811: Public Financing for Solar

Repayment Through Property Tax Assessment

- ▶ Property owners who choose to use AB 811 financing repay the city or county through a property tax assessment that is included in their property tax bill and that constitutes a lien against their property until it is paid off.
- ▶ The obligation to pay the assessment transfers to a new owner if the property is sold during the repayment period.
- ▶ State and federal tax credits and rebates for solar installations can still apply.

AB 811: Public Financing for Solar

AB 811 Assessment Districts

- ▶ An AB 811 assessment district can cover a single development project or an entire city or county.
- ▶ The few existing AB 811 programs cover entire cities, but developers may want to consider working with cities or counties to create an AB 811 assessment district for a specific development project or area.
- ▶ Developers can obtain authorization from the city or county to purchase and install improvements on their own; they do not have to go through the city or county.

AB 811: Public Financing for Solar

Established AB 811 Programs

- ▶ City of Palm Desert: Loans for solar installations, energy efficiency improvements, and custom energy measures for residential, commercial, industrial, and other property.
- ▶ City of Solana Beach: Loans for solar installations on residential or commercial property.
- ▶ City of Berkeley: Loans for solar installations on residential or commercial property. This program predates AB 811 but is similar to an AB 811 program.



AB 811: Public Financing for Solar

San Diego's Proposed AB 811 Program

- ▶ Mayor Jerry Sanders has proposed establishing a “Clean Generation Program” under AB 811 for solar and other renewable energy installations for residences and businesses.
- ▶ Property owners who choose to participate will repay the financing over a 20-year period.
- ▶ The program will likely go before the City Council in mid-2009.



What's Next for Solar Installations?



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