

# Leasing and Distributed Generation

---

Nexus Associates, Inc.  
April 5, 2002

# Purpose of the paper

---

- State funds are interested in exploring various means to induce greater demand for small-scale renewable energy projects in distributed generation applications.
- This paper discusses the potential role of leases as a means for customers to finance purchases of PV systems and fuel cells for installation on the customer-side of the meter.
- It describes different types of leases, discusses the potential benefits and disadvantages of leasing, reviews the experience of existing PV leasing programs in the United States, and discusses the implications for state funds.



## Leasing programs for PV systems and fuel cells have been suggested as an alternative means of financing equipment costs.

- PV systems and fuel cells can be installed on the customer-side of the meter in residential, commercial and industrial buildings.
- The cost of purchasing and installing these systems can easily run between \$6,000 and \$10,000 per kW.
- As a result, customers may be interested in financing the purchase of renewable energy technologies, rather than paying 100% of the cost of the system at the time of purchase.
- Some people have argued that leasing can result in lower costs to end-users, leading to greater demand. As will be discussed below, this depends on the nature of the lease, tax considerations, and the relative cost of capital between different parties involved in the transaction.



# A critical issue in leasing is the ownership of the underlying asset from the point of view of taxation.

## Tax benefits flow to the owner of the equipment:

Taxable business	Individual taxpayer	Non-taxable entity
<ul style="list-style-type: none"><li>• Depreciation</li><li>• Interest payment deductions</li><li>• Tax credits</li></ul>	<ul style="list-style-type: none"><li>• No deductions, unless equipment purchase is financed through home mortgage or equity loan. In that case, interest payments are deductible</li><li>• Tax credits</li></ul>	<ul style="list-style-type: none"><li>• No tax benefits</li></ul>

- As discussed later, the type of lease determines ownership. In true leases, ownership of the asset remains with the lessor; whereas in capital leases, ownership is transferred to the lessee.



# To qualify for tax benefits, the lease needs to be defined as a “true lease” under IRS rules.

- The Internal Revenue Service (IRS) defines leases according to their tax orientation: true leases and non-tax oriented leases.
- For a lease to be qualified as a **true lease** by the Internal Revenue Service, all of the following conditions must be met:<sup>1</sup>
  - Transfer of ownership prior to the maturity of the lease is not allowed;
  - There can be no bargain purchase option;
  - The remaining economic life for the asset at the end of the lease must be at least one year or 20% of the originally estimated life; and
  - The lessor has to maintain at least 20% of the asset’s value throughout the term of the lease.
- Under a true lease, the lessor (owner of the capital asset) is eligible to all favorable tax treatments. Specifically, as a tax-paying entity, the lessor can take advantage of the accelerated depreciation scheme (MACRS) and a 10% solar tax credit in the case of leasing a PV system. In addition, some states have additional tax deductions for solar energy.

<sup>1</sup> The Fair Accounting Standards Board (FASB) defines the leases as Operating leases or Capital leases. The first two conditions for a True lease are the same as FASB accounting standards for an Operating lease, but the last two are different. For accounting purposes, the comparable standard for remaining economic life is 25%, and the lessor only needs to retain 10% of the asset’s value.



# The tax advantages of a lease to the lessee depend on the nature of the lease and the tax status of the lessee.

- In a **True Lease** the lessor owns the equipment and leases it to the lessee for a pre-determined contract period. Lease payments made by the lessee are fully tax deductible as an operating expense.
  - Since the lessor owns the leased equipment under a true lease, any tax benefits in the form of depreciation deductions accrue to the lessor. The lessor may pass these tax benefits through to the lessee in the form of reduced lease payments.
  - Therefore, the value of the tax benefit is dependent, in part, on the relative tax exposure of the lessor and lessee. If the value of the tax benefit to the lessor is greater than the tax benefit to the lessee, there is a potential for the lessee to realize savings through a true lease agreement.
- **Capital Leases** (non-tax oriented) are essentially installment purchases. Equipment ownership is transferred to the lessee. Lessees have the guaranteed option to purchase the equipment for a nominal price at the conclusion of the lease. Lessees (assuming that they are taxable businesses) can claim deductions for equipment depreciation and interest payments. (These tax deductions would also be available for other types of financing.)
- There are no direct tax advantages to individual taxpayers (and not-for-profit organizations) from leasing. Lease payments cannot be deducted from taxable income.



# Operating (true) leases have other potential advantages in addition to beneficial tax treatment.

- Leased equipment is not reported on the balance sheet, allowing companies greater flexibility in taking on additional debt.
- Leasing minimizes the need for upfront capital. Leases are typically structured to enable the lessee to finance 100% of asset costs, including design, delivery, installation, interest during construction period, and sales tax. Down payments are minimal or not required at all.
- Security requirements in leasing agreements are minimal. The leased equipment is usually all that is needed to secure a lease transaction; lessees are not required to pledge additional assets as collateral.
- The risk of technology obsolescence is born by the lessor because the lessee has no obligation to buy the equipment at the end of the lease. Also, ongoing performance and technology risks are shifted to the lessor. Similarly, if a customer thinks that they may move to a new residence on which PV would not be suitable, leasing may be more attractive.
- However, there are several disadvantages to leasing equipment, rather than purchasing:
  - The lessee does not have any equity in the equipment at the end of the lease term;
  - The cost of removal is usually borne by the lessee if the equipment is not purchased or leased again at the end of the lease term;
  - Companies that lease equipment may lose certain tax advantages. For example, accelerated depreciation under tax rules may be faster than the depreciation schedule incorporated in the lease structure.



# Tax-exempt municipal leases offer lease financing to local and state governments.

- Tax-exempt municipal lease financing is used by local and state governments to finance equipment acquisitions, the construction of public facilities, and the expansion and rehabilitation of existing public facilities.
- The lessor can be an independent leasing company, a trustee bank, a “constituted authority” such as a redevelopment agency, building ownership authority, or parking authority, or a non-profit organization.
- Under a tax-exempt municipal finance lease, the interest component of rental payments paid by a local/state government is treated as tax-exempt for federal income tax purposes to the lessor. Under a tax-exempt municipal true lease, the interest payment is not treated as tax-exempt to the lessor, because the lessor is entitled to other tax benefits, such as depreciation, resulting from the ownership of the leased property.
- Tax-exempt municipal lease purchase agreements are fixed payment obligations tied to the annual operating budget of the tax-exempt organization. These lease-purchase agreements limit the lessee's payment obligations to the current budget appropriation period. This allows the financing agreement to be treated not as a capital debt obligation, but part of the organization's operating budget and an expense item for accounting purposes. Hence, the approval process for a lease is generally much less expensive and faster than issuing a bond, especially when town referendums can be avoided.



# It is important to recognize how lessors view leasing transactions.

- As a general rule, leasing companies profit either by adding a premium (spread) to their cost-of-funds (in the case of a capital lease) or by speculating on the future fair market value of the equipment being leased (in the case of an operating lease).
- Generally, the interest rate used by a leasing company to calculate lease payments is based on the government bond yield rate plus a premium (spread). This is known as the lessors cost-of-funds (COF). The lessor's COF is the minimum return a leasing company must earn to cover their cost of capital and administrative expenses (break-even).
- To profit from a capital lease transaction (similar to a term loan), the lessor must add an interest rate premium to their basic COF. This premium generally ranges from 25 basis points (0.25%) to 800 basis points (8%), subject to credit risk and dollar amount of the transaction.
- To profit from an operating lease transaction (or True lease), the lessor will finance the transaction at their basic COF and speculate on the future fair market value of the equipment.
- The lessor derive profits by taking advantage of cost differentials with respect to tax exposure, capital costs, and equipment costs (e.g., through volume discounts).
- With an operating lease, the lessor is generally taking a risk that at the end of the term the lessee will either purchase the leased property, renew the lease, or the leasing company can remarket the leased property for its residual value.



# The leasing process involves a number of steps.

- An equipment vendor and customer negotiate the price for equipment.
- The customer requires financing in the form of a lease.
- The vendor contacts a leasing company (lessor) on behalf of the customer or the customer contacts a leasing company directly.
- The lessor and customer negotiate the lease. The lessor and lessee sign an agreement specifying a fixed lease term, monthly payments, purchase option, and other terms and conditions.
- The vendor delivers the equipment to the customer (lessee).
- The Vendor invoices the leasing company (lessor) for the sale price of the equipment.
- Once the customer (lessee) inspects and accepts the equipment delivery from the vendor, the customer (lessee) signs an Acceptance Certificate and delivers it to the lessor.
- Upon receipt of the Acceptance Certificate, the leasing company (lessor) pays the vendor and begins monthly invoicing to the lessee.
- At this point, the leasing company (lessor) holds and maintains title to the equipment throughout the term of the lease and the lessee is obligated to meet the terms and condition of the lease.
- The lessee is typically responsible for the cost of maintaining the equipment as well as other associated costs, including insurance.
- At the end of the lease term, the lessee returns the equipment or buys it at fair market value from the lessor in the case of an operating lease. In the case of a capital lease, the lessee is obligated to purchase the equipment from the lessor for the agreed amount. Title to the equipment is then transferred to the lessee.



## While PV systems and fuel cells could be leased like any other capital equipment, few leasing programs exist.

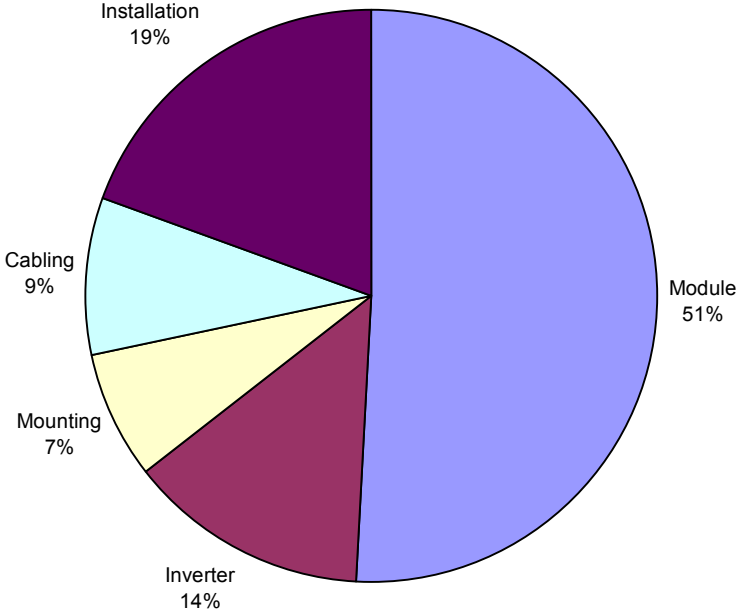
- The PV and fuel cell equipment manufacturers do not currently offer leasing options.
- Some financial institutions such as CreditAmerica have entered into leasing arrangements on the basis of individual demand.
  - Leases are generally limited to creditworthy commercial customers that have been in business for at least two years.
  - Lease terms are typically on the order of one to five years, with longer terms (seven years) possible depending on the customer and other elements of the deal.
  - Equipment must be backed with warranties (consistent with the lease term) from established manufacturers.
  - Due to transactions costs, the lease value must be more than \$10,000.
- A few public utilities have established leasing programs for PV systems.



# Low and/or uncertain residual values for PV systems and fuel cells make leasing unattractive from the lessors perspective.

- As noted above, lessors make money on operating leases, in part, by speculating on the residual value of equipment
  - The residual value of PV systems lies only in the modules which represent half of the system costs.
  - The limited market for used PV modules limits the fair-market-value of PV systems at the end of the lease.<sup>1</sup>
  - Uncertainties with respect to the life of fuel cells also places downward pressure on residual values.
- As a result, lessors would prefer to recover the full cost of the system during the lease term, all other things being equal.
- However, this would constitute a capital lease, reducing available tax incentives.

Percentage of the Installed Cost of a 1 kW PV system



Source: Fraunhofer Institute for Solar Energy Systems, 1998.



<sup>1</sup> Telephone interviews with distributors of Astropower, Siemens Solar, Kyocera, and Photowatt PV systems in March, 2002.

## The leasing programs offered by public utilities have not met with success due, in part, to the availability of better financing alternatives.

- Public utilities in two states currently offer PV leasing programs for **remote** customers where building a line extension would be more expensive than installing a PV system at the customer site.<sup>1</sup> The utilities do not intend to profit from these leasing programs.
  - Carbon Power & Light (CP&L) in Wyoming has a PV leasing program where the utility provides the PV equipment, handles installation, and conducts routine maintenance of the systems. Since its inception, roughly 15 customers have signed up for the program.
  - Plumas-Sierra Rural Electric Cooperative in California launched the Geothermal and Photovoltaic Leasing Program in 1998. In the three years of operation, it has attracted only two PV customers that have stayed in the program.
- Arizona Public Service created the “Remote Solar Electric Service” in 1997 to provide self-contained solar units to off-grid residential customers. About 35 PV units were leased to residential customers before the utility decided to terminate the program due to high costs (including maintenance) and a general lack of interest among potential customers.
- The Sacramento Municipal Utility District (SMUD) which operates the largest PV program in the United States does not offer a leasing alternative based, in part, on the conclusion that alternative forms of financing for residential homeowners are preferable.

<sup>1</sup> Most states require a free-footage allowance of 300 feet. The customer is responsible for paying the rest of the line extension.



## One state utility has piloted a grid-connected PV leasing program.<sup>1</sup>

- Northern State Power/Xcel Energy started a pilot program in 1997 for leasing grid-connected 2 kW PV systems in Minnesota. The program had 24 participants in 2000.
- Under the heavily subsidized program, the lease payment is \$50 per month. Participants are also net-metered.
- The lease term is five years. Customers can buy the PV system at the price of \$4,000 or renew the lease for another five years, after which they can purchase the system for \$1. The first five-year term is coming up in 2002 and most customers are renewing their leases.
- More than half of the system costs are covered by the state of Minnesota and federal funds.
- The pilot program is not going to be extended to new customers in the future. Xcel Energy says that they had some technical problems. Also, the PV systems were not able to fully meet customer expectations. In some years, the solar panels were covered by snow for three months therefore preventing their use. At the time when leasing started, manufacturers did not offer long warranties for their systems but the utility was in charge of taking care of system failures.

<sup>1</sup> The Wisconsin Public Service Corporation had plans to lease solar water heating systems (i.e., not PV) several years ago, but the plan was never implemented.



## At least one state fund has approached PV vendors and leasing companies to establish a leasing program.

- At the end of 2000, the Reinvestment Fund (TRF)/Sustainable Development Fund in Pennsylvania held discussions with a financing company and a solar manufacturer about arranging a PV leasing program for non-profit organizations, such as schools, hospitals, and housing projects.
- The basic idea was the following:
  - For smaller PV systems (<50 kW), TRF would provide low interest funding to the financing company under a 10-year lease, with the expectation of being paid off in full at the end of 5 years. In turn, the financing company would provide a 10-year taxable equipment lease to the end-user. The financing company would own the leased equipment and be able to reap the tax benefits. The lessee would at the end of 5 years have the option to purchase the PV equipment at a pre-determined price or to continue leasing the equipment under a continuation of the lease that would then be funded by a new investor. Either way, TRF would be paid off after 5 years.
  - For larger PV systems (>50 kW), financing would begin as a commercial lease and would after 5 years (once the tax incentives had been fully used) be refinanced with municipal bond financing. Ownership of the equipment would initially be held by the financing company, but at the end of 5 years, the anticipated municipal bond financing would require transfer of the PV equipment to a non-profit entity.
- At the end, the program was not realized due to lack of interest from the financing company and the solar manufacturer.



Source: Email from Rob Sanders, TRF, March 2002.

# In surveys, people have indicated that they would prefer to own a PV system rather than lease it.

- When asked if people prefer to lease or own a PV system:
  - 38% preferred to own their system
  - 36% were unsure whether to own or lease, and
  - 17% preferred leasing.<sup>1</sup>
- Reasons for owning the system were that systems were perceived as highly reliable and the best financial advantage would come from owning them, including increased resale value of the home.
- Reasons for leasing commonly included the belief that the technology would advance and people would be left with older systems and that leasing would provide a way out.
- When people were asked to rate the importance of 15 product features on PV systems, the product feature “leasing the system, with option to buy” came up as the last point in importance. In contrast, the most important features were the lifetime of a system (at least 20 years), a manufacturer provided warranty, and rebates or tax credits for purchasing the renewable system.<sup>2</sup>

<sup>1</sup> A market assessment of residential grid-tied PV systems in Colorado. NREL. September 2000.

<sup>2</sup> Homeowners' attitudes related to using renewable energy in Northeast Wisconsin. PA Consulting Group. August 2001.



# Financing PV purchases through home mortgages is generally less expensive for residential customers on an after-tax basis.

- For residential customers, mortgage financing is generally more attractive than leasing given the tax deductibility of interest payments and lower transaction costs.
- For example, a study done a few years ago compared the estimated final price for PV-generated electricity under five financing scenarios:
  - Home equity loan
  - Equipment leasing by
    - » Investor-owned utilities
    - » Publicly owned utilities
    - » Third-party, non-utility developer using corporate finance
    - » Third-party, non-utility developer using project finance.
- Taking into account capital costs and relevant tax benefits, the study concluded that leasing companies generally could not lease equipment as a price below what residential customers would pay assuming that customers financed the purchase through a home equity loan.
- The only exception was publicly-owned utilities assuming that financed the system with 100% debt financing using tax-free government bonds.

The Economics of Residential End-Use PV

Ownership/Financing Scenarios		Photovoltaic Real Levelized Price (¢/kWh)
Homeowner Financing		21.0
Equipment Leasing	Investor-Owned Utility	27.3
	Publicly Owned Utility	15.2
	Nonutility Developer, Corporate Financed	24.6
	Nonutility Developer, Project Financed	43.1

Source: Jones and Eto, Berkeley, 1997  
See Appendix A for assumptions.

# Further analysis demonstrates the potential impact of reductions in the cost of PV systems and the cost of capital on monthly lease payments.

- For example, assume that a leasing company purchases and installs a one kW system in the northeast (e.g., Boston) at a cost of \$10,000. Also assume that the company's weighted average cost of capital is 9.35% (This represents the median for finance, insurance and real estate companies in the United States in 2000).
- The leasing company would be entitled to a 10% federal solar tax credit and accelerated depreciation allowance (MACRS) on the PV system, assuming that the lease qualified as a True Lease (i.e., lease payments cannot exceed 80% of the total installed cost of the system).
- At the end of the lease term, the leasing company would still own the equipment and could either sell it at resale value or use it for another installation. We assume that the residual value of the system after the seven-year lease term is 20% of the total equipment cost.
- Assuming that the leasing company passes the full value of tax benefits to the customer, monthly lease payments would be on the order of \$88 (or \$0.71/kWh).
- Lowering the cost of the PV system by 10% – for example, through bulk purchases or grants – would reduce lease payments to roughly \$78/month (\$0.64/kWh). The cost of the PV system would have to be brought down to \$2,000 to match prevailing electricity prices in Boston (\$0.14/kWh)
- Lowering the cost of capital by 10% from 9.35% to 8.42% would reduce lease payments to \$83/month (primarily by increasing the present value of MACRS and the residual value of the system). Even if the cost of capital were zero, the resulting monthly lease payment would still equate to \$0.37/kWh.
- The last column explores a possibility of reducing of the cost of capital to 5% and lengthening the lease term to 20 years. The calculation includes the replacement cost of one inverter. These measures would bring the cost of the system down to \$41/month (\$0.34).
- In addition, PV systems require a certain amount of maintenance. For example, the current operation and maintenance (O&M) costs are \$0.08/kWh in the Boston area.

	Base case	10% reduction in system cost	10% reduction in interest	Low interest rate and longer term
<b>Assumptions</b>				
Purchase and installation of system	\$10,000	\$9,000	\$10,000	\$10,000
Inverter replacement	No	No	No	Yes
Interest rate	9.35%	9.35%	8.42%	5.00%
Lease term	7 years	7 years	7 years	20 years
<b>Present Value of Lessor's Costs</b>				
Purchase and installation of system	\$10,000	\$9,000	\$10,000	\$10,000
Less value of MACRS tax deduction	\$2,537	\$2,283	\$2,594	\$2,285
Less value of federal solar tax credit	<u>\$1,000</u>	<u>\$900</u>	<u>\$1,000</u>	\$1,000
Inverter replacement at year 10				<u>\$1,500</u>
Total after-tax costs	\$6,463	\$5,817	\$6,406	\$7,675
<b>Present Value of Lessor Revenues</b>				
Customer's total lease payments	\$5,393	\$4,854	\$5,270	\$6,254
Equipment's residual value	<u>\$1,070</u>	<u>\$963</u>	<u>\$1,136</u>	<u>\$1,421</u>
Total revenues	\$6,463	\$5,817	\$6,406	\$7,675
<b>Net present value</b>	0	0	0	0
<b>Customer's monthly lease payment</b>	<b>\$88</b>	<b>\$79</b>	<b>\$83</b>	<b>\$41</b>
<b>Average price (\$/kWh)</b>	\$0.71	\$0.64	\$0.68	\$0.34

Source: Nexus Associates, Inc.



## Potential Role of State Funds

---

# This suggests a potential role for state funds in leasing programs.

- States are interested in lowering the cost of PV systems and fuel cells to end-users to induce greater demand.
- Leasing arrangements provide a means to lower costs to end-users when the lessor's costs are less than the lessee's due to differences in capital costs and tax exposure.
- As such, state programs need to recognize differences among potential customers of PV systems and fuel cells:
  - Given the current tax code, leasing arrangements are unlikely to result in lower costs to residential customers compared to mortgage financing in the absence of other subsidies.
  - Similarly, government entities generally have access to lower cost capital than commercial leasing companies, making leasing less attractive (except in cases where capital budgeting constraints are a concern).
  - Given that leasing companies may have lower capital costs and an ability to take greater advantage of tax benefits than other taxable and non-taxable entities, it may be possible to structure true leases that result in lower cost to the customer on an after-tax basis.
- For tax purposes, the owner of the PV system or fuel cell needs to be a taxable entity, preferably with sufficient taxable income to benefit from allowable tax incentives. The state funds themselves should not own the asset because they are not in a position to take advantage of tax benefits due to their tax-exempt status.
- The state funds can, however, facilitate the establishment of leasing programs by making potential deals more attractive to both lessors and lessees.



# As a next step, the state funds should consider the following actions:

- The state funds should explore the potential for establishing leasing programs with well-established leasing companies.
- The leasing program should focus on commercial/industrial customers (including tax-exempt organizations).
- State funds could facilitate the establishment of a leasing market through the following:
  - Negotiate lower prices with equipment vendors;
  - Provide capital on concessionary terms to leasing companies to lower their capital costs;
  - Guarantee a “high” residual value for equipment at the end of the lease;
  - Buy down interest rate for customers; and/or
  - Negotiate longer lease terms with leasing terms.
- Leasing programs will need to be established in conjunction with equipment vendors to ensure that adequate warranty and maintenance agreements are in place.



# Appendix A – Assumptions used in analysis by in Jones and Eto

	Homeowner financing	POU	IOU	Leasing NUD (corp. finance)	NUD (project finance)
Rated Power of Unit	2 kW	2 kW	2 kW	2 kW	2 kW
Installed capital cost (\$/Watt)	5.00	5.00	5.00	5.00	5.00
Annual operating expense	\$160	\$160	\$160	\$160	\$160
Equipment lifetime	30 yrs	30 yrs	30 yrs	30 yrs	30 yrs
Performance deterioration	0%/year	0%/year	0%/year	0%/year	0%/year
Capacity factor	0.207	0.207	0.207	0.207	0.207
Debt rate	9.0%	5.5%	7.5%	7.5%	9.5%
Debt term	20 yrs	30 yrs	30 yrs	30 yrs	10 yrs
Equity rate	N/A	N/A	12%	12%	18%
Minimum DSCR (debt service coverage ratio)	N/A	N/A	N/A	N/A	1.4
Debt fraction	100%	100%	50%	50%	optimized <sup>1</sup>
Discount rate <sup>2</sup>	6.1% <sup>3</sup>	5.5%	8.3%	8.3%	variable <sup>4</sup>
Lease price escalation rate <sup>5</sup>	0	0	0	0	3.5%
Federal income tax (corporate)	N/A	N/A	35%	35%	35%
Federal income tax (individual)	28%	N/A	N/A	N/A	N/A
State income tax	6%	N/A	6%	6%	6%
State sales tax	8.5%	8.5%	8.5%	8.5%	8.5%
Property tax	3% of book value	N/A	3% of book value	3% of book value	3% of book value
Inflation rate	3.5%	3.5%	3.5%	3.5%	3.5%
REPI payments/year for 10 years	N/A	\$0.015	N/A	N/A	N/A
Investment tax credit	N/A	N/A	N/A	10%	10%
Tax depreciation	N/A	N/A	5-year MACRS	5-year MACRS	5-year MACRS

<sup>1</sup> The NUD, project-financed debt fraction is optimized to obtain the lowest price of electricity, subject to the constraints of minimum DSCR and minimum ROE.

<sup>2</sup> The discount rate is assumed to be the weighted average cost of capital (WACC) for all scenarios:  $WACC = \text{Debt Fraction} * \text{Debt Rate} * (1 - \text{Effective Income Tax}) + \text{Equity Fraction} * \text{Equity Rate}$

<sup>3</sup> The discount rate for the homeowner is the debt rate less the tax effect resulting from the deductibility of the interest payments.

<sup>4</sup> The discount rate for a NUD using project-financing depends on the debt fraction, which is optimized for each set of assumptions. If the debt fraction is 50%, the discount rate is 11.95%.

<sup>5</sup> The lease price escalation rate only affects the project-financed NUD alternative.



# Appendix B – Assumptions used in analysis by Nexus Associates.

Assumptions	Base case	System cost 10% lower	Cost of capital 10% lower	Cost of capital 5%, term 20 years, 1 inverter replacement
Total installed cost of system	\$10,000	\$9,000	\$10,000	\$10,000
Customer lease payments' share of total cost	80%	80%	80%	80%
Residual value of equipment	20%	20%	20%	20%
Weighted average cost of capital	9.35% (median for banking, finance, and insurance)	9.35% (median for banking, finance, and insurance)	8.42%	5%
Federal solar tax credit, % total installed cost	10%	10%	10%	10%
MACRS accelerated depreciation, year 1 (basis 95% original cost)	20%	20%	20%	20%
MACRS year 2	32%	32%	32%	32%
MACRS year 3	19.2%	19.2%	19.2%	19.2%
MACRS year 4	11.52%	11.52%	11.52%	11.52%
MACRS year 5	11.52%	11.52%	11.52%	11.52%
MACRS year 6	5.75%	5.75%	5.75%	5.75%
Lease term, years	7 yrs	7 yrs	7 yrs	20 yrs
Lessor's tax bracket	34%	34%	34%	34%
Annual O&M, Boston	\$117	\$117	\$117	\$117
Inverter replacement	N/A	N/A	N/A	\$1,500

