

Structuring, Modeling & HLBV Accounting for Tax Equity

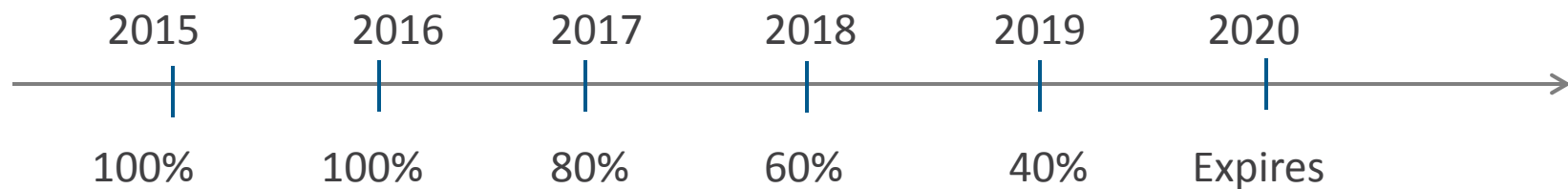
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Tax Credit Extension for Wind Projects

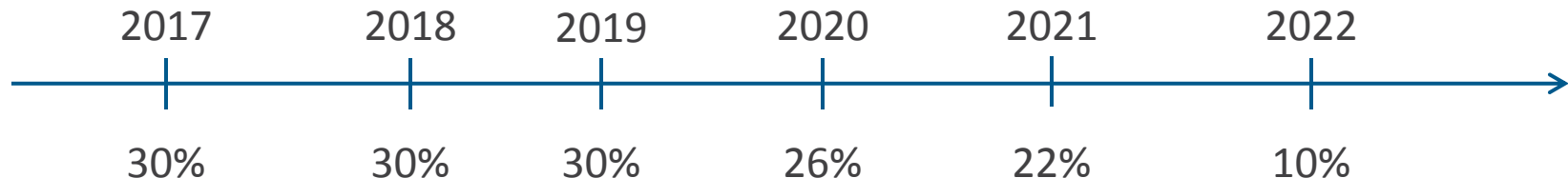
- Wind projects qualify for the § 45 PTC at rate of \$0.023/kWh (that will continue to be periodically adjusted by the IRS for inflation); the credit will ramp-down based on when the project *starts construction* based on the following schedule:



- Alternatively, wind projects have the option to claim the 30% ITC, across the same timeframe; ITC for a wind project would be subject to the same ramp-down schedule (i.e., a project that started construction in 2019 will qualify for a 12% ITC => 30% * 40%)

Tax Credit Extension for Solar

- The § 48 ITC for solar ramps down in accordance with the following schedule for the *start of construction*:



- To qualify for more than a 10% § 48 ITC, a project must be *placed in service* by the end of 2023, regardless of its start of construction date
 - Wind, unlike solar, does not have a placed in service statutory deadline, but the IRS’s guidance created a “soft” deadline (discussed below)

Other Renewables

- Geothermal, biomass, landfill gas, incremental hydroelectric and ocean energy projects qualify for the PTC with a "begun construction" provision through December 31, 2016
- Legislation introduced in Congress to provide these technologies with an extension too
 - Their extension failed to pass as an amendment to the FAA bill but still has momentum
 - Their omission from the 2015 extension has been described as inadvertent
- Qualifying projects also have the option to select a 30% ITC in lieu of the PTC

Bonus Depreciation

- Bonus depreciation year extended through 2020:
- "New" equipment placed in service through 2018 is eligible for an immediate 50% deduction of the equipment's tax basis, with the balance following the normal depreciation table
- A ramp-down schedule for equipment placed into service after 2018 is as follows: 40% bonus in 2019; 30% bonus in 2020
- An additional year for each deadline above can be applied to equipment with longer depreciation lives, such as transmission assets; qualifying projects that are not finished until 2019, for example, could still qualify for the 50% depreciation level, as opposed to the 40% level; however, the 50% depreciation itself is only applicable to the tax basis built up through 2018

Start of Construction Guidance – IRS Issued New Guidance for Wind, Waiting for Solar

- For wind projects in service after 2017 and solar projects in service after 2019, the amount of the credit will be determined by when *construction started*
- IRS issued Notice 2016-31 for Wind
 - Wind projects have until December 31 of the year that included the **fourth** anniversary of the start of construction date to be "placed in service" (e.g., if construction started June 1, 2016, then project must be in service by December 31, 2020) to avoid "continuous" work/construction requirement
- IRS said in Notice 2016-31 that it is working on guidance for solar
 - On June 21, 2016, a Treasury lawyer stated at a conference to expect solar guidance in the fall/winter
 - The lawyer would not commit to solar having the same four year window, as wind, to be placed in service

Start of Construction Guidance – IRS Issued New Guidance for Wind, Waiting for Solar (cont'd)

- IRS can assert construction started before 2016 (e.g., if construction started May 1, 2014, then the project must be in service by December 31, 2018)
 - Developers report that tax equity investors are asking if in prior years “did the developer put a shovel in the ground?”
- Optimal year to start construction for wind is 2016 because that is the last year of the full PTC and have until December 31, 2020, to be in service
- Optimal year to start construction for solar is 2019, which is the last year the solar ITC will be at the full 30%, and gives developers the most time to benefit from declines in panel prices and improvements in technology

IRS Start of Construction Guidance

- Two methods to start construction:
 - Commence "physical work of a significant nature" or
 - Incur at least 5% of the cost of the project
 - Must take delivery of equipment purchased with 5% within 3.5 months of payment (e.g., April 15 if pay on December 31)
 - But must take delivery in same year if vendor provides debt financing
- Both methods generally follow the Treasury Cash Grant guidance but with some key differences
- No minimum level of work was required in order to meet the "physical work of a significant nature" requirement
 - Qualifying work – operational road construction, digging turbine foundations, manufacturing a customized step-up transformer or manufacturing other equipment not held inventory by the manufacturer
 - Work not done by the project owner directly must be performed pursuant to a "binding written contract," which has certain highly technical requirements

Tax Equity Markets Overview

Back in 2007-08, when interest rates were around 4%, a tax equity fund could yield a return of 5-7%. Now, with interest rates around 1%, a tax equity fund can produce 8-10% returns because demand has exceeded supply as the solar market grows.

Vailla Wang, SolarCity Teams up with Bank of America to Reel in Tax Equity Investors, FORBES, May 28, 2015 (quoting Lyndon Rive, CEO SolarCity)

Wind Overview

- After-tax IRR of 7 to 9.5% unlevered for partnership deals
- 15 to 20 investors in the wind market; Each is very particular, so each deal only has a handful of candidates
- PTC only available in partnership and direct ownership structures
- ITC is available in a partnership, sale-leaseback or pass-through lease structure



Solar Overview

- Wide range of after-tax return rates as market is less mature
 - SolarCity in 2015 said tax equity returns are from 7 to 12% after-tax IRR unlevered
 - Utility scale returns aligning closer to wind
- SolarCity in 2015 said tax equity investor's return is composed of 65% ITC, 14% accelerated tax depreciation and 22% cash flow
- ITC is recaptured if a transfer or a reduction in a partner's allocations by more than 1/3 occurs in the first five years
 - Secured debt is rare as a foreclosure in the first five years would trigger recapture and a tax bill for the tax equity investor
 - "Back leverage" is more typical

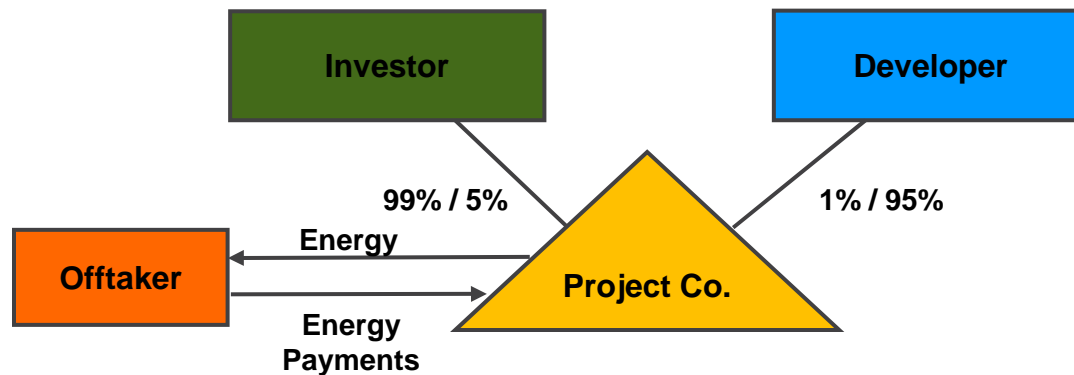
3 Solar Markets: Utility Scale, Distributed Generation and Residential

- Utility scale is projects over 1 MW
 - These projects are getting rare as utilities are reluctant to sign power purchase agreements
 - Utility scale is being dominated by balance sheet players, like MidAm and Southern
- Distributed generation - 500 kw to 1 MW
 - Municipal government buildings and big box stores are typical sites
 - Tax equity investors are getting more and more comfortable in this space
- Residential - largest demand, fewer investors but expanding
 - Great opportunity but many issues to get comfortable with (e.g., net metering regulation (Nevada), consumer protection laws)



Partnership Flip

Partnership Flip Structure – Rev. Proc. 2007-65



- Project typically is financed with some combination of Developer equity and Investor equity and, in some cases, debt
 - Investor acquires interest in project company for cash
 - Investor typically makes an up-front investment, although, Investor in a PTC deal also may make pay-as-you-go payments (i.e., PAYGO)
- Investor initially is allocated as much as 99% of tax items (PTC or ITC and depreciation) and subsequently "flips" down to as little as 5% after achieving a specified after-tax IRR

Partnership Flip Structure – Rev. Proc. 2007-65 (cont'd)

- Cash may be distributed in the same manner that tax items are allocated, or Developer may have a cash preference for some period to recover development costs
- Developer generally has purchase option after flip point
 - Option may not be exercised until 5 years after property is placed in service

Partnership Flip Structure – Rev. Proc. 2007-65 (cont'd)

- Advantages

- Flexible structure that allows efficient monetization of as much as 99% of tax benefits
- IRS safe harbor in context of wind projects (Rev. Proc. 2007-65)
- Widely used and accepted structure
- Developer's purchase option is less costly
- Can be used for PTC & ITC

- Disadvantages

- Developer must have at least a 1% interest in tax items & depreciation haircut due to a "short" first year
- In case of ITC, Investor must be in partnership before placed-in-service date
- Complicated partnership tax rules and financial accounting

Partnership Flip Structure – Sharing Ratios

	Pre-Flip Period ⁽¹⁾		Post-Flip Period	
	Investor	Developer	Investor	Developer
Pre-Tax Cash	30%	70%	5%	95%
Tax Credits	99%	1%	5%	95%
Taxable Income/ Loss	99%	1%	5%	95%

(1) Flip typically occurs in Year 10 for wind or Year 6 for solar

- The ultimate objective is to allocate tax benefits to a party that can use them most efficiently
- There are many variations of the basic structure

Partnership Flip Structure – Key Considerations

- Project capital structure
 - Tax equity investment can reach up to ~70% for wind and up to ~50% for solar
 - Tax equity market does not like project-level debt. Back-leverage is more common
- Sharing ratios % (pre-tax cash, tax benefits)
- Tax equity investor target IRR and flip dates
 - Tax equity unlevered after-tax IRRs of 7-9.5%
 - Tax equity cash-on-cash IRRs
- Compliance with complex partnership taxation rules
 - § 704(b) capital accounts and outside basis
 - Possible re-allocation of tax benefits can lead to tax inefficiencies
- Choice of financial accounting method
 - Consolidation vs. equity method vs. cost method vs. fair value method of accounting for investment in a project
 - Hypothetical liquidation at book value (HLBV) method for allocating book earnings to partners



704(b) Capital Accounts and Outside Basis

- Each partner maintains a set of 704(b) capital accounts and outside basis to measure what they put in and take out of a partnership
- Both 704(b) capital account and outside basis restrict the amount of taxable losses that the partnership may allocate to a partner to the equity that the partner has contributed to the partnership. Typically, ending balances cannot go below zero
- 704(b) capital account is its claim on partnership assets at liquidation. Outside basis will determine how much gain a partner has if it sells its partnership interest
- Capital accounts and outside basis impact the allocation of US GAAP earnings between partners under the Hypothetical Liquidation at Book Value (HLBV) method

Project Economics:

- cash and tax benefit sharing ratios
- target returns and flip dates



Tax Logic:

- 704(b) capital accounts
- outside basis



Accounting Logic (HLBV):

- partnership liquidation provisions
- HLBV waterfall and earnings

704(b) Capital Accounts – Example

Class A 704(b) Capital Account

	2017	2018	2019	2020	2021	2022
Starting Balance	-	1,614,066	-	-	-	-
Add Equity Contributions	3,526,892	-	-	-	-	-
Less Pre-Tax Cash Distributions	(3,228)	(8,655)	(8,871)	(9,106)	(9,338)	(9,573)
Less 50% ITC Adjustment	(1,283,685)	-	-	-	-	-
Add Minimum Gain Chargeback (MGC) Income	-	-	-	-	-	-
Add Taxable Income	-	-	-	-	-	55,068
Less Taxable Loss	(625,913)	(2,261,941)	(1,200,336)	(557,194)	(542,985)	(112,549)
Add 734 Adjustment	-	-	-	-	-	-
Less 734 Depreciation	-	-	-	-	-	-
Other Adjustments	-	-	-	-	-	-
Interim Balance	1,614,066	(656,530)	(1,209,207)	(566,300)	(552,322)	(67,054)
Add Allocation of Minimum Gain	-	-	-	-	-	-
Add Class A DRO	-	-	-	-	-	-
Interim Balance - Adjusted	1,614,066	(656,530)	(1,209,207)	(566,300)	(552,322)	(67,054)
Add Stop Loss Reallocation from Class A to Class B	-	656,530	1,209,207	566,300	552,322	67,054
Add Stop Loss Reallocation from Class B to Class A	-	-	-	-	-	-
Ending Balance	1,614,066	-	-	-	-	-

- 704(b) capital account starts at the sum of the cash and property (at FMV) that the partner contributes to the partnership
- 704(b) capital account goes up by equity contributed and taxable income allocated to the partner and down by cash distributed or taxable losses allocated to the partner during the life of the partnership

Outside Basis – Example

Class A Outside Tax Basis

	2017	2018	2019	2020	2021	2022
Starting Balance	-	1,614,066	-	-	-	-
Add Equity Contributions	3,526,892	-	-	-	-	-
Less Pre-Tax Cash Distributions	(3,228)	(8,655)	(8,871)	(9,106)	(9,338)	(9,573)
Less 50% ITC Adjustment	(1,283,685)	-	-	-	-	-
Add Taxable Income from 704(b)	-	1,398	8,871	9,106	9,338	9,573
Add / Less: Increase / (Decrease) in Class A's Share of Liabilities	-	-	-	-	-	-
Other Adjustments	-	-	-	-	-	-
Interim Balance	2,239,979	1,606,809	-	-	-	-
Add Distributions in Excess of Outside Basis	-	-	-	-	-	-
Less Taxable Loss from 704(b)	(625,913)	(1,606,809)	-	-	-	-
Interim Balance before Suspended Losses	1,614,066	-	-	-	-	-
Add Suspend Loss Generated	-	-	-	-	-	-
Less Suspended Loss Used	-	-	-	-	-	-
Ending Balance	1,614,066	-	-	-	-	-

- Outside basis starts with the sum of the cash and basis of property (generally, at cost) that the partner contributes to the partnership. If the partnership has nonrecourse debt, then the partner's share of this debt is added to its outside basis
- Outside basis goes up by equity contributed and taxable income allocated to the partner and down by cash distributed or taxable losses allocated to the partner during the life of the partnership

704(b) Capital Accounts and Outside Basis – Key Concepts and Definitions

- **Deficit Restoration Obligation (DRO)**. One way of dealing with a negative balance in 704(b) capital account is for the partners to agree to a DRO. A partner that agrees to a DRO will have to contribute cash to the partnership, if it has a negative capital account when the partnership liquidates. This is because a partner that dips below the line essentially "borrows" equity from the other partner. An investor typically caps the DRO it is willing to step into at a fixed dollar amount, generally between 10-20% of its total investment, although some investors refuse to agree to any DRO
- **Minimum gain** permits a partner to claim losses (non-recourse deductions) beyond its equity investment in the partnership. It also tracks the amount of for these extra losses that will be charged back to a partner in the future (minimum gain chargeback)

704(b) Capital Accounts and Outside Basis – Key Concepts and Definitions (cont'd)

- **Stop Loss Reallocations**. In the event 704(b) capital account balance shows a deficit in excess of any deficit restoration obligation (DRO) and minimum gain, that loss would be "reallocated" to the other partner. The reallocated losses are also taken into account in determining each partner's share of taxable income, which flows through the calculation of the partner's outside basis
- **Excess Distribution**. Whenever a partner receives a distribution that would exceed its tax basis, the partners' 704(b) capital accounts are increased
- **Suspended Losses**. No allocation of losses shall drag the partner's tax basis below zero. Unlike for 704(b) capital accounts, these excess losses are not reallocated to the other partner. They are merely suspended to be claimed in a later period when the partner's outside basis is positive

Accounting for Investment and HLBV

There are four methods of accounting for an investment:

Method	General Criteria	HLBV Use
1. Consolidation	Variable interest model vs voting interest model (ASC 810-10, FIN46R, ARB 51)	Yes
2. Equity method	"Significant influence" over operating and financial policies (ASC 323-10, ASC 970-323, SOP 78-9). If consolidation is not appropriate, use this method.	Yes
3. Cost method	Rare in partnership flip structures. Used when the investor's investment amount is minor (< 3-5%)	No
4. Fair value	Changes in FV flow through earnings.	No

- In the partnership flip context, HLBV is the preferred income allocation technique because project's capital structure provides different rights and priorities to its owners or ownership percentages are not specified
- Conventional income allocation approaches (e.g. fixed percentage ownership interest or effective yield) do not reflect economic reality. HLBV overcomes the challenges of these conventional approaches

HLBV Steps

- HLBV determines how better or worse off the partners are at the end of the period than they were at the beginning of the period in a tax equity structure assuming hypothetical liquidation of a project at book value
- To determine the periodic income/loss allocation under HLBV, one must follow the three steps:
 - STEP 1.** Assume liquidation of project assets at book value per liquidation provisions in the partnership agreement
 - STEP 2.** Determine how much of the liquidation proceeds to allocate to each partner
 - STEP 3.** Calculate the change in the allocated liquidation proceeds to each partner during the period and record as book income/loss (adjusted for cash distributions and equity contributions)

HLBV Liquidation Waterfall

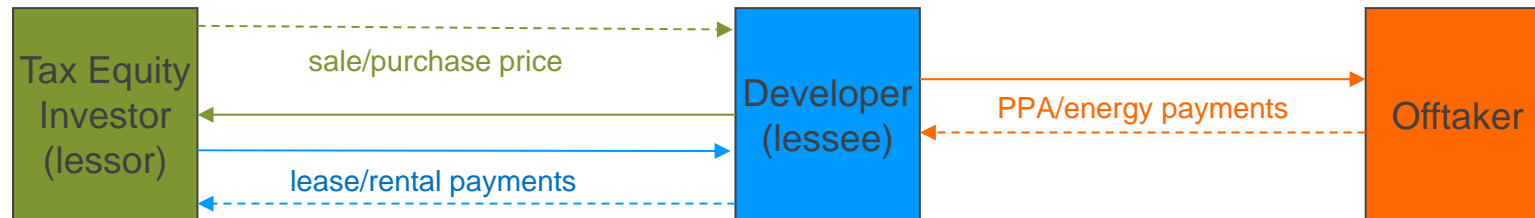
- Taxable gain is allocated in accordance with liquidation provisions in the partnership agreement
- Typical liquidation waterfall has the following steps:
 1. Allocation of the hypothetical gain to eliminate deficit balances in capital accounts of the partners
 2. Allocation of remaining liquidation proceeds to tax equity investor to achieve target after-tax IRR
 3. Back-end sharing of remaining liquidation proceeds at pre-agreed ratios
- HLBV method reflects the underlying economics of a project. GAAP income allocation using HLBV differs from traditional equity method

HLBV – Numerical Example

	12/31/2018		12/31/2019	
Project-Level Pre-Tax Income (Loss)	91,505		102,348	
Project Adjusted Net Book Value	9,550,438		9,209,216	
Gain upon Liquidation	4,324,416		5,639,224	
	Developer	Investor	Developer	Investor
704(b) Capital Account Balance Pre-Liquidation	5,226,023	-	3,569,992	-
HLBV Waterfall				
STEP 1: Restore Deficit Balances in Capital Accounts	-	-	-	-
STEP 2: Gain Allocated to Investor to Achieve Target Return	-	1,541,171	-	1,532,300
STEP 3: Back-End Sharing per LLC Agreement	2,644,082	139,162	3,901,579	205,346
Ending 704(b) Capital Account Balances for Liquidation	7,870,105	1,680,333	7,471,571	1,737,646
Claims on Equity upon Liquidation				
Beginning Balance	8,180,189	1,711,472	7,870,105	1,680,333
Equity Contributions	-	-	-	-
Cash Distributions During the Period	(424,073)	(8,655)	(434,699)	(8,871)
Pre-Tax Income (Loss)	113,989	(22,484)	36,164	66,184
Ending Balance	7,870,105	1,680,333	7,471,571	1,737,646

Lease Structures for Investment Tax Credit Eligible Projects

Sale-Leaseback Structure



- Project is sold by Developer to Tax Equity Investor and then leased back to Developer
 - Developer delivers power to offtaker via a PPA
- Tax Equity Investor, as owner/lessor, claims
 - ITC
 - Tax depreciation which is reduced by 50% of the ITC
- Developer, as lessee, retains physical possession and is the seller under the PPA

Sale-Leaseback Structure (cont'd)

- Advantages

- Structure can be implemented up to 3 months after placed-in-service date
- In theory, provides 100% financing to developer
- Developer retains upside if project performance exceeds expectations because rent payments are fixed
- § 467 enables rent schedule to be sculpted to optimize returns
- Financial accounting is straight forward and may be attractive

- Disadvantages

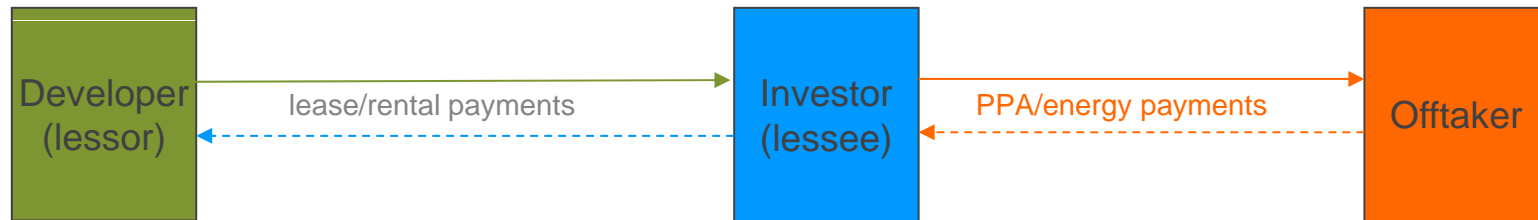
- Developers dislike the fact the purchase option is expensive, because the Investor owns the entire project at the end of the lease and residual value must be at least 20%
- Generally not available with respect to PTC because credit requires recipient to own & operate the facility (exception for biomass projects)

Pass-Through Lease Structure

- Developer does not have appetite for ITC but wants:
 - To retain ownership of the project
 - An Investor to pay it for the ITC
 - Avoid tax on a sale to Investor
- Solution: Pass-Through Lease
 - Developer leases project to Investor
 - Developer elects to pass the ITC to Investor
 - Investor claims ITC based on notional FMV as determined by an appraisal (see § 50(d)(5) referring to prior § 48(d))
 - At lease end, the project automatically reverts to Developer
 - Investor makes a significant rent payment at closing to Developer, so Developer receives cash in excess of ITC



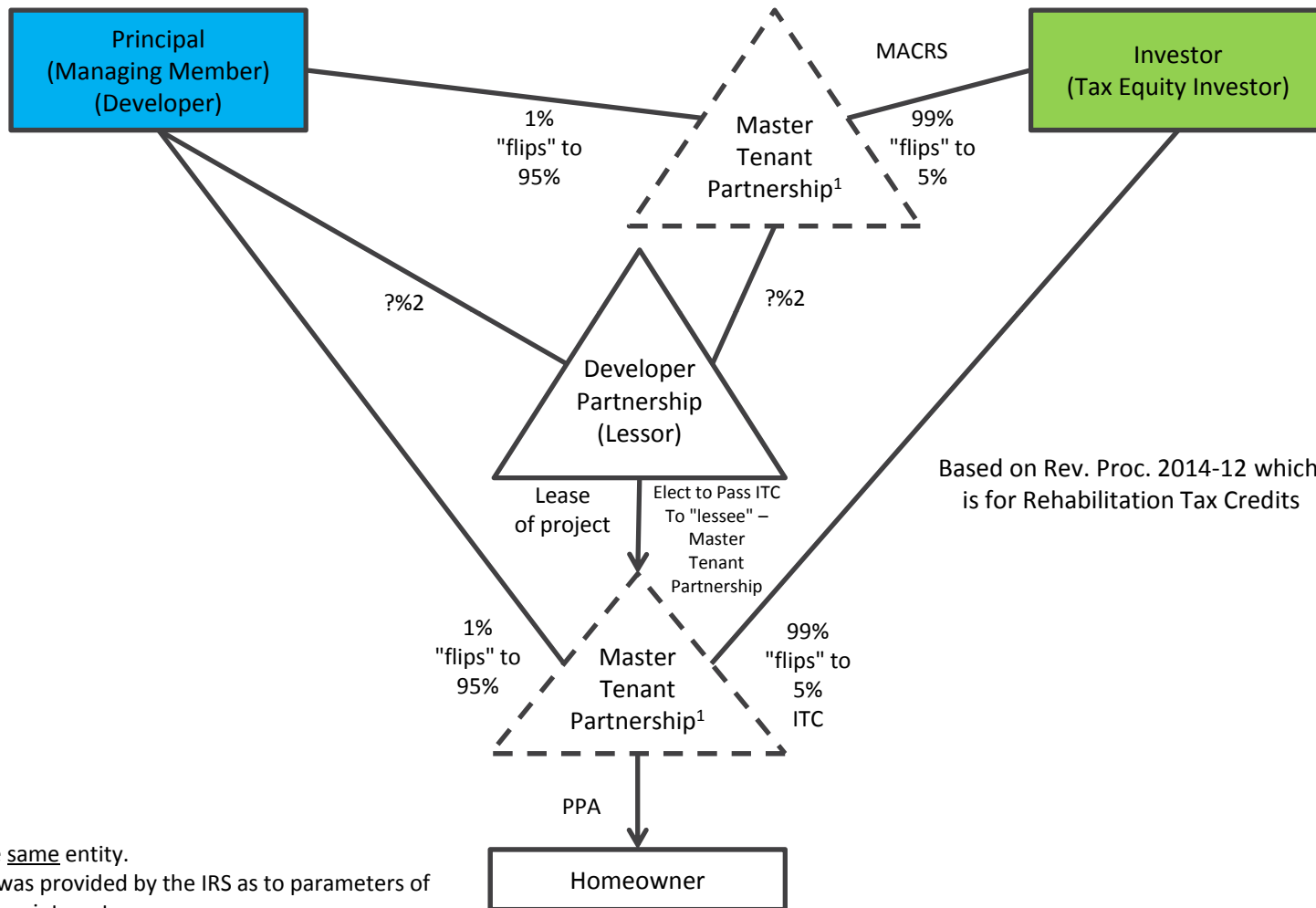
Pass-Through Lease Structure (cont'd)



- Developer leases project to Investor
 - Investor delivers power to offtaker via a power purchase agreement ("PPA")
 - At lease end, which needs to be at least 5 years, the project is returned to the Developer
- Tax Attributes
 - Investor claims ITC of 30% of notional FMV
 - Investor deducts rental accrued per § 467
 - Investor has income annual inclusion equal to 3% of FMV for 5 years (in lieu of 50% basis adjustment)
 - Investor has taxable income from PPA payments
 - Developer depreciates project using its tax basis (i.e., cost)
 - Developer pays tax on accrued rent per § 467
- Trade off: Step-up ITC to 30% of FMV w/o tax cost, but Investor does not claim MACRS

Lease and Partnerships in a Single Transaction – Master Tenant Partnership

Master Tenant Partnership: Inverted Lease for ITC Transactions



¹ These are the same entity.

² No guidance was provided by the IRS as to parameters of these percentage interests.

Flip Partnership, Sale-Leaseback & Pass-Through Lease Comparison

	Available for Production Tax Credit Deals	Amount of Developer's Upfront Proceeds	Cost for Developer to Re-Acquire Interest at End of Transaction	Taxable Income Recognized by Developer at Closing	Monetization of MACRS Depreciation	Availability of IRS Structuring Guidance	Simplicity
Flip Partnership: RP 2007-65	●	●	●	●	●	●	●
Sale-Leaseback	●	●	●	●	●	●	●
Pass-Through Lease	●	●	●	●	●	●	●
Inverted Lease	●	●	●	●	●	●	●

Speaker Biographies



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David K. Burton is a partner in Mayer Brown's New York office and a member of the Tax Transactions & Consulting practice. He leads Mayer Brown's Renewable Energy group in New York.

He advises clients on a wide range of US tax matters, with a particular emphasis on project finance and energy transactions. In addition, he also advises clients on tax matters regarding the formation and structuring of domestic and offshore investment funds.

David has extensive experience structuring tax-efficient transactions, such as sale-leasebacks, flip partnerships, pass-through leases and other structures, for the acquisition and financing of renewable energy assets.

Earlier in his career, David was the managing director and senior tax counsel at GE Energy Financial Services (GE EFS), one of the world's leading investors in energy projects. At GE EFS, David oversaw all of the tax aspects for more than \$21 billion in global energy projects from structuring transactions to accounting for taxes to formulating tax policy initiatives. During his tenure at GE EFS, the division's investments in wind, solar, hydro, biomass and geothermal power grew to \$6 billion, making GE EFS the largest tax-advantaged energy investor in the US. Before joining GE EFS, David was a tax lawyer at GE Capital and primarily focused on aircraft and equipment leasing and financing and asset acquisitions.

David has been recognized by *Chambers USA* 2015 in the area of Projects: Renewables & Alternative Energy. He was named to A Word About Wind's "Legal Power List 2016!" and in 2016 received an award from the Burton Foundation for legal writing excellence for his article "How Can a Renewable Energy Plan be Sold for a Capital Gain".

David received his BA magna cum laude from Ithaca College in 1993 and his JD cum laude from the Georgetown University Law Center in 1996, where he was on the staff of *The Tax Lawyer*.

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Gintaras Sadauskas is a Director at Alfa Business Advisors. Mr. Sadauskas focuses on providing financial and commercial advice in relation to the development, financing, purchase and sale of power generation assets (solar, wind, gas, hydro, geothermal and coal). During the past fifteen years, he has been involved in numerous project financings and portfolio transactions in North America, Europe, Asia, Latin America and Africa.

Prior to joining Alfa Business Advisors, Mr. Sadauskas worked in the project finance and M&A groups at the AES Corporation headquarters. He participated in multiple acquisitions and structured project financings in the US and internationally. Prior to AES, Gintaras worked in the Financial Advisory Services Group at KPMG in Europe.

Mr. Sadauskas received an MBA degree from the Darden School of Business, University of Virginia and M.Sc. in International Management from the University of Lausanne in Switzerland.

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