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Alternative Energy Financing Structures - Overview

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Alternative Energy Structures – Tax Considerations

- Accelerated Tax Depreciation
  - Currently 100% for new and used equipment until 1/1/2023 when it decreases 20% a year until phased out
  - Accelerated depreciation is inapplicable, if (1) financing structure is a lease (i.e., not a power purchase agreement characterized as a "service contract") AND (2) lessee is a tax-exempt entity (college, town, etc.)
- Production Tax Credits (PTC)
  - Production tax credit only available in partnership and direct ownership structures; claiming entity must be producing the energy (i.e., not available in equipment leasing transactions)
  - Eligible for a stated kWh production tax credit
  - PTC for projects starting construction in 2019 = 40% of 2.4 cents/ kWh
  - PTC is claimed for 10-years based on PTC rate that applies given project's "placed in service" and start of construction dates
  - PTC increased periodically by IRS to reflect inflation 2.4 cents with inflation v. 1.5 cents originally
  - Ownership in existing projects may be transferred and new owner may then receive the PTCs allocated to them for the remainder of year period
  - PTCs are not available for solar projects
  - Repowering projects require that 80% of the FMV of the completed project consist of new equipment
    - More wind projects are being repowered

Alternative Energy Structures – Tax Considerations

- Investment Tax Credit (ITC)
  - Requires equipment to be NEW
  - Taxable basis reduced by ½ of ITC
    - Currently 30% for solar projects where construction had commenced and was placed in service during 2019,
    - 26% if commenced during 2020,
    - 22% if commenced during 2021 and
    - 10% thereafter based on start of construction (separate rules)
  - Cogeneration, geothermal
    - 10% tax credit
  - Battery storage
    - Qualified for solar based on % of recharging coming from ITC eligible project but must be in excess of 75% for first five years
- Sec. 163(j) interest expense deduction limitations
  - Few transactions are levered
  - Sec. 163(j) limitation is measured at the partnership level
- Other complex areas
  - "Deficit Reduction Obligation" for partnerships to avoid negative capital account constraints
  - Suspended losses due to insufficient "outside" basis in a partnership interest
  - Minimum gain adjustments
  - Sec. 754 basis step ups when buying into an existing transaction
  - Sec. 59A – base erosion anti-avoidance tax (BEAT) for U.S. multi-nationals (e.g., U.S. company with a foreign parent) potentially limits a portion of the tax credits

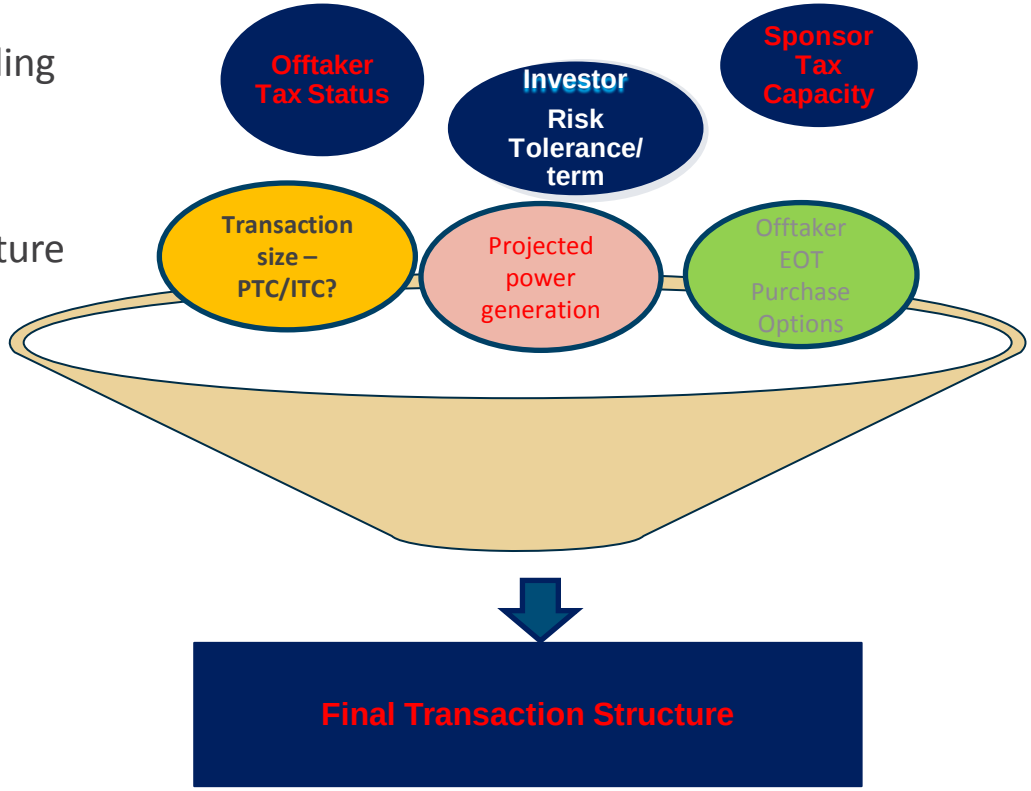
Alternative Energy Financing Structures

Renewable energy project economics in the US heavily depend on tax incentives.

Financing structures are selected depending on the multiple objectives and factors:

The choice of a particular financing structure depends on a number of factors / constraints:

- Project parameters (technology, size, economics)
- Investor / lender preferences
- Market conditions
- Regulatory environment



The ultimate objective is to allocate tax benefits to a party that can use them most efficiently.

Possible Tax Credit Structures

- Partnership Tax Equity Flip Structure
  - Must first meet Service Contract rules – Sec. 7701(e)(3)&(4) if (a) PTC deal or (b) tax-exempt offtaker
  - Partnerships governed by Partnership Income Allocation rules – Sec. 704 & Rev. Proc. 2007-65 (which technically only applies to wind PTC)
- Lease Structures
  - Sale leaseback
    - Governed by Rev. Proc. 2001-28/29, Sec. 467 level rent rules, Sec. 168 tax depreciation
  - Pass Through Lease & Inverted Lease
    - Governed by Rev. Proc. 2014-12, which technically applies only to historic tax credits

PARTNERSHIP TAX EQUITY FLIP STRUCTURE

Partnership Tax Equity Flip Structure – Rev. Proc. 2007-65

Typical Allocations

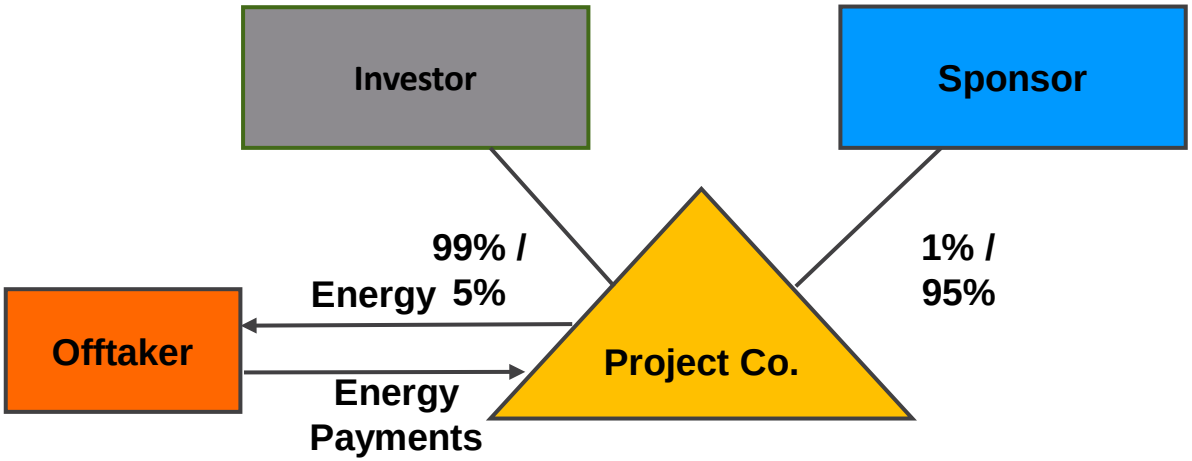
	Pre-Flip Period		Post-Flip Period	
	Tax Investor	Sponsor	Tax Investor	Sponsor
Cash	0% 100% (2)	100% (1) 0%	5%	95%
Tax Credits	99%	1%	N/A	N/A
Taxable Income / Loss	99%	1%	5%	95%

(1) Until the earlier of the initial capital contribution recovery or a date certain.
(2) From the date in (1) through the Flip Date (typically Year 10 for a PTC project).

Key considerations:

- Tax equity sizing
- Tax equity target IRR, flip dates
- Compliance with partnership taxation rules (Sec. 704(b) capital accounts, tax basis).
- Choice of financial accounting method, e.g. HLBV method. Hypothetical liquidation and tax make-whole provisions (tax implications of liquidation must be considered) in HLBV.
- Cash sharing is relatively flexible and not limited to example above.
- Structure is more reflective of wind than solar.

Partnership Tax Equity Flip Structure



- Project typically is financed with some combination of Sponsor 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 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 5% after achieving a ***specified after-tax IRR***
- Cash may be distributed in the same manner that tax items are allocated, or Sponsor may have a cash preference for some period to recover development costs
- Sponsor generally has purchase option to buy out tax equity investor after achieving target IRR after the flip point
- Option may not be exercised until 5 years after property is placed in service

Partnership Tax Equity Flip Structure (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
  - Sponsor's purchase option is less costly than under a lease
  - Can be used for PTC & ITC
  - Less restrictive re dealing with tax-exempt off-takers
- Disadvantages
  - Sponsor must have at least a 1% interest in tax items
  - In case of ITC, Investor must be in partnership before placed-in-service date
  - Complicated partnership tax rules
  - Complicated financial accounting - Hypothetical Liquidation at Book Value (HLBV); below the line after-tax income measurement

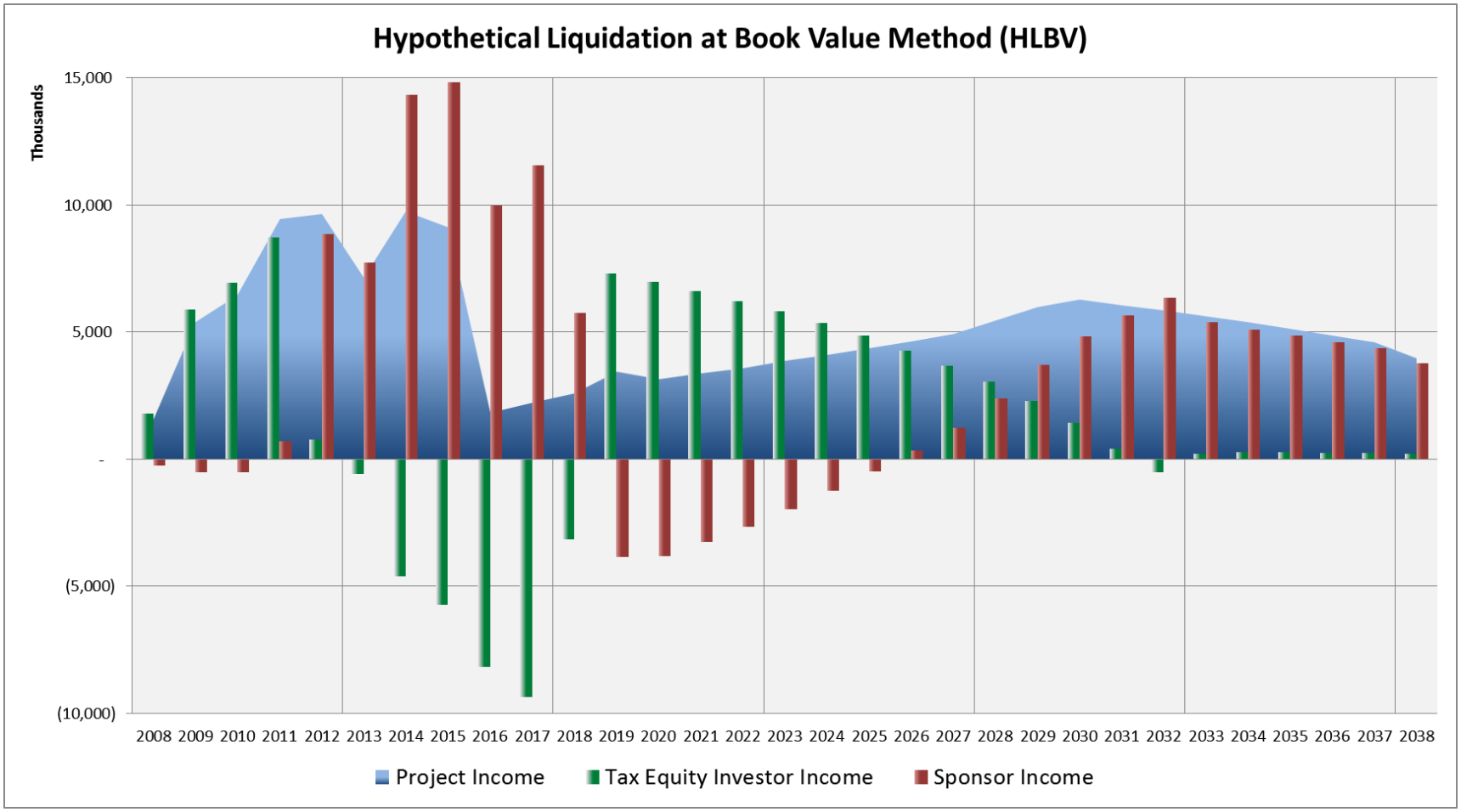
Partnership Tax Equity Flip - Tax complexity - Modeling Sec 704(b) Capital Accounts and Tax Basis

- Think of 704(b) capital accounts and tax basis as "tax accounting statements" - every partnership has them.
- 704(b) capital account starts at the sum of the cash and property (at FMV) that the partner contributes to the partnership. Tax 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 his tax basis.)
- Both 704(b) capital account and tax basis go up (by income allocated to the partner) and down (by cash distributed or losses allocated to the partner) during the life of the partnership.
- 704(b) capital account is its claim on partnership assets at liquidation. Tax basis will determine how much gain a partner has if it sells its partnership interest.
- Both 704(b) capital account and tax basis restrict the amount of 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.
- Stop Loss Reallocations. In the event 704(b) capital account balance shows a deficit in excess of any deficit restoration obligation and allocable non-recourse debt, 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 partners' tax bases.

Partnership Tax Equity Flip - Financial Reporting - Hypothetical Liquidation at Book Value (HLBV)

- The HBLV (Hypothetical Liquidation at Book Value) is an income or loss allocation method for US GAAP purposes. HLBV is frequently used in Variable Interest Entities ("VIEs") where cash and tax benefit sharing ratios between partners change over the life of a project.
- The method 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, one must follow the steps:
  - ✓ Assume liquidation of project assets at book value per liquidation provisions in the partnership agreement
  - ✓ Determine how much of the liquidation proceeds to allocate to each partner
  - ✓ Calculate the change in the allocated liquidation proceeds to each partner during the period and record as book income/loss (adjusted for distributions and contributions)
- Typical liquidation waterfall has the following four steps:
  - ✓ Allocation of the hypothetical gain to eliminate deficit balances in capital accounts of Class A and Class B members;
  - ✓ Class B (sponsor) return of capital;
  - ✓ Class A (tax equity investor) target IRR (including tax credits and other tax benefits);
  - ✓ Back-end sharing of remaining liquidation proceeds at pre-agreed ratios.
- The HLBV method produces non-linear GAAP income allocation results

Variability of HLBV Income Allocation over Project Life



The HLBV method can produce non-linear GAAP income allocation results.

APPENDICES:

- Tax Credit Phase Out/Down
- IRS Start of Construction Guidance
- HLBV Example

TAX CREDIT PHASE OUT/DOWN RULES

Tax Credit Phase-Out/Down Summary

- Solar investment tax credit (ITC) continues to be 30% with phase down to 10% from 2019 to 2023 based on the "start of construction" date
- Wind production tax credit (PTC) continues to be a ten-year stream at 2.4 cents per kWh for projects that started construction in 2016 or earlier
  - For projects that "start construction" in 2017, the PTC is 80% of 2.4 cents, 60% in 2018, 40% in 2019 and then expires
  - The PTC for new and operating projects continues to be eligible for inflation adjustments that since 1992 have increased it 60% (1.5 to 2.4 cents)
- The Bipartisan Budget Act of 2018 extended the 30% ITC for fuel cells, small wind, and solar lighting with a phase down from 2019 to 2023 based on the "start of construction" date
- The Budget Act also extended the 10% ITC for combined heat and power and microturbine facilities, so long as they start construction before 2022

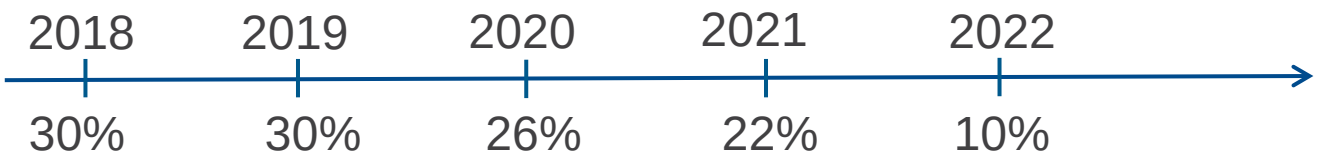
Tax Credit Phase Out for Wind Projects

- Wind projects qualify for the § 45 PTC at rate of $0.024/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 Declining to 10% 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)

TAX CREDIT ELIGIBILITY: IRS START OF CONSTRUCTION GUIDANCE

Start of Construction Guidance – IRS Guidance for Solar and Wind

- Renewable energy tax credits determined by when the project started construction
- IRS issued Notice 2016-31 for Wind and Notice 2018-59 for Solar:
  - 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 on a wind project in June 1, 2016, then project must be in service by December 31, 2020) to avoid "continuous" work/construction requirement

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 in 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
  - Look-Through Rule – EPC contractor can satisfy 5% safe harbor for project owner if EPC contractor and project owner have a binding written contractor (EPC contractor effectively finances 5% safe harbor for project owner)

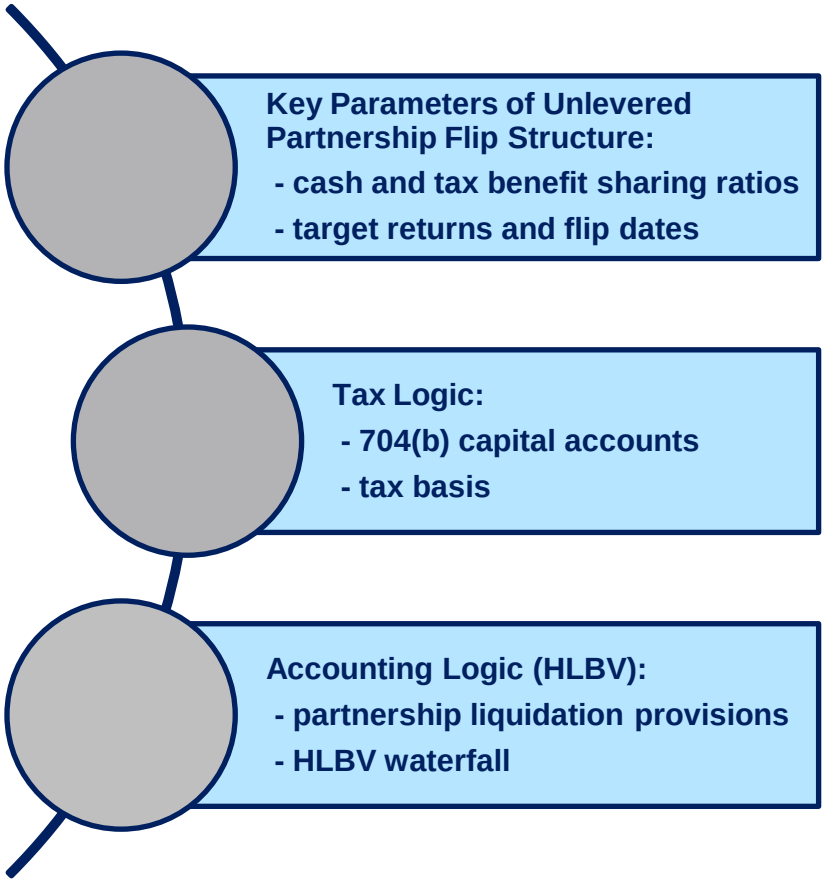
HLBV Numerical Example

	6/30/2014		7/31/2014	
Project-Level Income (Loss)	**368,679**		**(93,369)**	
Project Adjusted Net Book Value	**125,855,117**		**124,974,211**	
Gain upon Liquidation	**109,091,867**		**108,779,519**	
	Sponsor	**Investor**	**Sponsor**	**Investor**
704(b) Capital Account Balance Pre-Liquidation	(10,046,525)	26,809,775	(10,043,765)	26,238,457
HLBV Waterfall				
STEP 1: Restore Deficit Balances in Capital Accounts	10,046,525	-	10,043,765	-
STEP 2: Sponsor Receives Return of Investment	5,892,397	-	5,895,156	-
STEP 3: Gain Allocated to Investor to Achieve Target Return	-	59,452,071	-	59,059,808
STEP 4: Back-End Sharing per LLC Agreement	29,523,651	4,177,223	29,593,660	4,187,129
Ending 704(b) Capital Account Balances for Liquidation	**35,416,047**	**90,439,069**	**35,488,817**	**89,485,394**
Claims on Equity upon Liquidation				
Beginning Balance	**34,443,323**	**91,770,652**	**35,416,047**	**90,439,069**
Equity Contributions During the Period	-	-	-	-
Cash Distributions During the Period	-	(727,538)	-	(787,537)
Income (Loss) During the Period	972,724	(604,045)	72,769	(166,138)
Ending Balance	**35,416,047**	**90,439,069**	**35,488,817**	**89,485,394**

Note: project-level income (loss) and partners' income (loss) are pre-tax

Modeling 704(b) Capital Accounts and Tax Basis

- This is one of the most complex areas of partnership taxation.
- To assess the economic impact of a given tax equity partnership structure, a clear understanding of the 704(b) capital accounts and tax basis logic is required.
- Financial models should have monthly 704(b) capital accounts and tax bases for each partner from financial close through project end that incorporate the following key components:
  - ❑ Contributions / distributions
  - ❑ Taxable income / (loss)
  - ❑ Remedial depreciation – 704(c)
  - ❑ Minimum gain
  - ❑ Stop loss reallocation
  - ❑ Excess distributions
  - ❑ Deficit Restoration Obligation ("DRO")
  - ❑ Suspended losses
  - ❑ Tools for easy updates for actuals and tie-out to filed tax returns.



Modeling Example - 704(b) Capital Accounts

§704(b) CAPITAL ACCOUNTS	2013	2014	2015	2016	2017	2018
Sponsor 704(b) Capital Account						
Opening balance	(0)	(0)	157,907	307,639	428,992	639,523
Contributions	-	-	-	25,608	113,787	138,955
Plus tax income	321,346	802,289	924,766	1,191,214	1,449,226	1,462,132
Minus tax losses	(78,838)	-	-	-	-	-
Remedial depreciation	(5,543)	(69)	(69)	(69)	(69)	(69)
Minus cash distribution	(272,349)	(644,312)	(774,965)	(1,095,399)	(1,352,413)	(1,361,355)
754 Step-Up	-	-	-	-	-	-
Interim balance	**(35,384)**	**157,907**	**307,639**	**428,992**	**639,523**	**879,186**
Stop loss reallocation from investor to sponsor	-	-	-	-	-	(696,454)
Stop loss reallocation from sponsor to investor	35,384	-	-	-	-	-
Min gain adjustments	-	-	-	-	-	-
Closing balance	**(0)**	**157,907**	**307,639**	**428,992**	**639,523**	**182,732**
Investor 704(b) Capital Account						
Opening balance	32,791,844	7,482,760	3,952,993	1,954,120	750,185	49,992
Contributions	-	-	-	-	-	-
Plus tax income	4,253,093	15,673,893	14,870,802	9,485,673	9,584,543	9,998,421
Minus tax losses	(8,626,443)	-	-	-	-	-
Remedial depreciation	(548,725)	(6,864)	(6,864)	(6,864)	(6,864)	(6,864)
Minus cash distribution	(20,351,625)	(19,196,796)	(16,862,812)	(10,682,744)	(10,277,873)	(10,738,003)
754 Step-Up	-	-	-	-	-	-
Interim balance	**7,518,144**	**3,952,993**	**1,954,120**	**750,185**	**49,992**	**(696,454)**
Stop loss reallocation from investor to sponsor	-	-	-	-	-	696,454
Stop loss reallocation from sponsor to investor	(35,384)	-	-	-	-	-
Min gain adjustments	-	-	-	-	-	-
Closing balance	**7,482,760**	**3,952,993**	**1,954,120**	**750,185**	**49,992**	**0**

Modeling 704(b) Capital Accounts and Tax Basis

- Excess Distribution. Whenever a partner receives a distribution that would exceed its tax basis, the partners' 704(b) capital accounts are increased.
- DRO. One way of dealing with a negative balance in 704(b) capital account is for the partners to agree to a ''deficit restoration obligation,'' or 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.
- A DRO is a real obligation, but it will not require the partner to post any collateral. Other than the case of a partnership that has borrowed non-recourse debt, the capital account deficit represents the amount of cash that the partner would be obligated to contribute to the partnership upon liquidation. An investor typically caps the DRO it is willing to step into at a fixed dollar amount, generally no greater than 10 percent to 20 percent of its total investment, although some investors refuse to agree to any DRO.
- Suspended Losses. No allocation of losses will 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

Modeling Example – Tax Basis

TAX BASIS	2013	2014	2015	2016	2017	2018
Sponsor tax basis						
Opening balance	(343,326)	210,942	375,782	532,447	660,733	878,197
Contributions	-	-	-	25,608	113,787	138,955
Plus taxable income	791,233	809,152	931,630	1,198,078	1,456,090	1,468,996
Minus Cash distribution	(272,349)	(644,312)	(774,965)	(1,095,399)	(1,352,413)	(1,361,355)
Interim balance	**175,558**	**375,782**	**532,447**	**660,733**	**878,197**	**1,124,793**
Excess Distribution	-	-	-	-	-	-
Minus Taxable loss	-	-	-	-	-	-
Stop loss reallocation incl. min gain adj.	35,384	-	-	-	-	(696,454)
Suspended Loss	-	-	-	-	-	-
Closing balance	**210,942**	**375,782**	**532,447**	**660,733**	**878,197**	**428,339**
Investor tax basis						
Opening balance	37,102,257	11,793,174	8,263,407	6,264,533	5,060,599	4,360,405
Contributions	-	-	-	-	-	-
Plus taxable income	-	15,667,029	14,863,938	9,478,810	9,577,679	9,991,557
Minus Cash distribution	(20,351,625)	(19,196,796)	(16,862,812)	(10,682,744)	(10,277,873)	(10,738,003)
Interim balance	**16,750,633**	**8,263,407**	**6,264,533**	**5,060,599**	**4,360,405**	**3,613,959**
Excess Distribution	-	-	-	-	-	-
Minus Taxable loss	(4,922,075)	-	-	-	-	-
Stop loss reallocation incl. min gain adj.	(35,384)	-	-	-	-	696,454
Suspended Loss	-	-	-	-	-	-
Closing balance	**11,793,174**	**8,263,407**	**6,264,533**	**5,060,599**	**4,360,405**	**4,310,413**