

# TREIA

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## *Wind Project Financing Structures*

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Principal



# Report

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- Presentation adapted from the report entitled, *Wind Project Financing Structures: A Review & Comparative Alternatives*.
  - Released September 2007. (<http://eetd.lbl.gov/ea/emp/reports/63434.pdf> )
  - Co-Authored with John Harper (Birch Tree Capital) and Mark Bolinger (LBNL).
  - Report commissioned by LBNL, with funding from the U.S. DOE's Wind & Hydropower Technologies Program.
- The purpose of the report is three-fold:
  - Survey recent trends in the financing of utility-scale wind projects in the United States.
  - Describe the seven principal financing structures through which most utility-scale wind projects (excluding utility-owned projects) have been financed from 1999 to the present.
  - Analyze the potential impact of these seven structures on the levelized cost of energy from wind power.

# Industry Background

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- The financing of wind projects varies from that of conventional power projects:
  - Wind projects have higher capital costs but lower operating costs (e.g., no fuel costs).
  - Federal tax support for conventional power is distributed throughout the entire fuel cycle, while Federal tax support for wind power is concentrated primarily at the power generation stage.
- The two principal Federal tax incentives available to wind projects are the production tax credit (“PTC”) and accelerated depreciation deductions (together, known as “Tax Benefits”).
- Tax Benefits provide a significant value to wind projects, but also complicate wind project finance, since most wind project developers lack sufficient Federal income tax liability to use the Tax Benefits efficiently.
- In response, multiple financing structures have emerged to attract investors, manage risks, and allocate Tax Benefits to entities able to use them efficiently.

# History of Modern Wind Finance

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- 1999-2002: Dominated by “Strategic Investors”.
  - Tax-motivated investors (“Tax Investors”) with a long-term strategic interest in the wind sector (e.g., FPL Energy).
  - Smaller developers unable to use Tax Benefits often had little choice but to sell their projects to a Strategic Investor.
- 2003-2006: Rise of the “Institutional Investor”.
  - More-passive Tax Investors (e.g., JP Morgan) get involved.
  - New structures allow ongoing ownership stake for developer.
- 2003-2006: Declining cost of equity and debt capital.
  - New investors attracted to the wind sector creates competition.
  - Increasing competition and comfort with financing structures has reduced cost of both debt and equity capital.

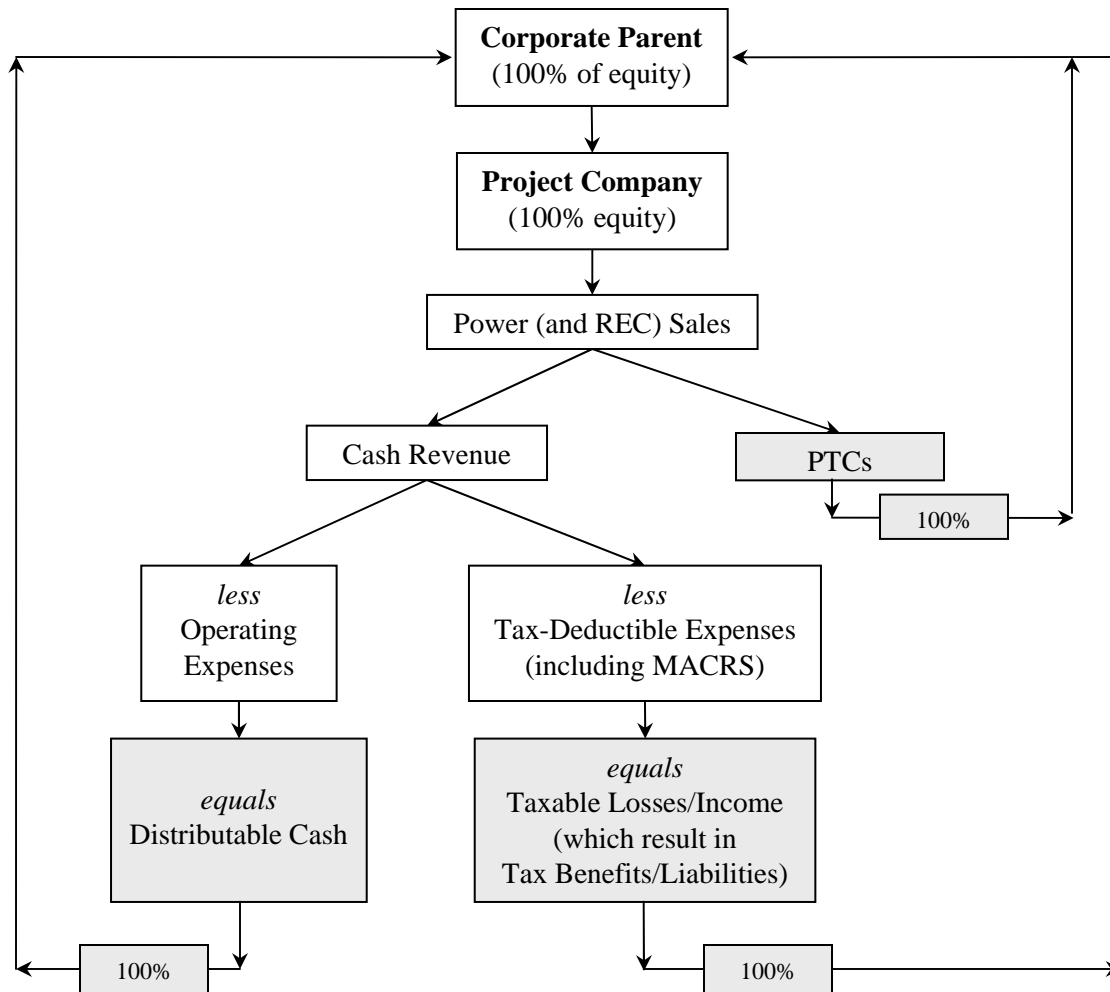
# IRS Revenue Procedure

- Revenue Procedure 2007-65, published on October 19, 2007, establishes safe harbor for wind energy “flip” structures.
  - See Internal Revenue Bulletin No. 2007-45 for full text: (<http://www.irs.ustreas.gov/pub/irs-irbs/irb07-45.pdf>).
- Safe Harbor will apply if all ten requirements of the Procedure are met. Below is a partial list of primary requirements.
  - Minimum Interest: developer at least 1%; investor at least 5% of its maximum interest.
  - Minimum Investment: investor must maintain an investment equal to at least 20% of its fixed capital contributions plus reasonably anticipated contingent capital contributions.
  - Contingent Consideration: at least 75% of an investor’s total capital contributions must be fixed and determinable.
  - Purchase Rights: (a) the exercise price of any call option, by either party, may not be for less than FMV, (b) a developer call option can not be exercised in first five years.
  - Sale Rights: partnership may not have a put option for the project, nor can the investor have a put option for its interest.
  - Guarantees and Loans: (a) no person may guarantee allocation of the PTC to the investor and (b) the developer (or related party) may not lends fund to investor for its share of the project nor guarantee any debt connected to the investment.
  - Allocation of PTCs: PTCs must be allocated in accordance with established regulations.
- This slide is not meant to be a detailed analysis of the Revenue Procedure, nor is Deacon Harbor providing legal advice. Please consult tax counsel with questions.

# Seven Structures Examined

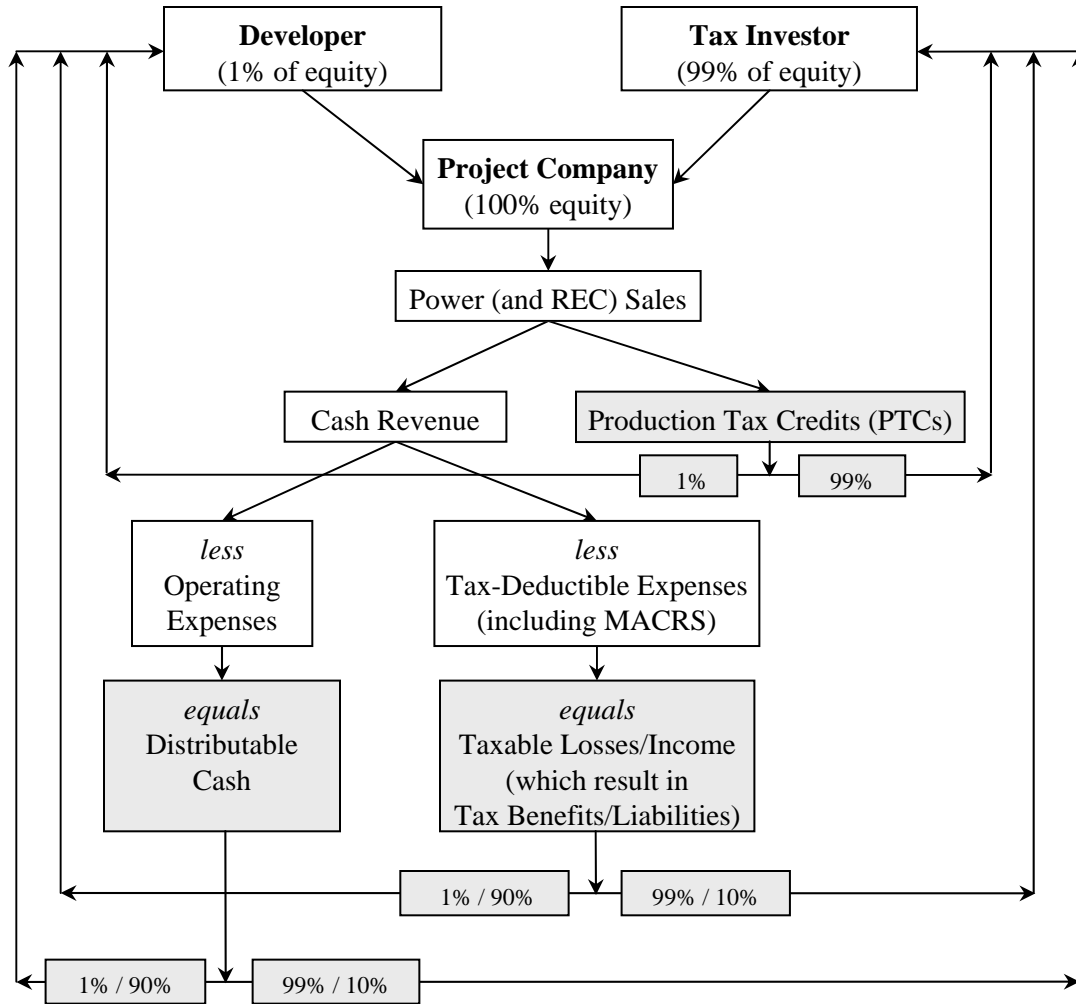
Financing Structure Name	Project Capital Structure	Likely Equity Investors	Brief Description of Structure Mechanics
<b>Corporate</b>	All Equity	Developer (corporate entity)	Corporate entity develops project and finances all costs. No other investor or lender capital is involved. Corporate entity is able to utilize Tax Benefits (no flip).
<b>Strategic investor Flip</b>	All Equity	Developer & Strategic Investor	Strategic Investor contributes almost all of the equity and receives a pro rata percentage of the cash and Tax Benefits prior to a return-based flip in the allocations.
<b>Institutional Investor Flip</b>	All Equity	Developer & Institutional Investor	Institutional Investor contributes most of the equity and receives virtually all of the Tax Benefits and, after the developer has recouped its investment, all of the cash benefits, until a return-based flip in the allocations.
<b>Pay-As-You-Go</b>	All Equity	Developer & Institutional Investor	Institutional Investor finances much of the project, injecting some equity up-front and additional equity over time as the PTCs are generated. Includes a return-based flip in the allocations.
<b>Cash Leveraged</b>	Equity and Debt	Developer & Institutional Investor	Based on the Strategic Investor Flip structure, but adds debt financing. Loan size/amortization based on the amount of cash flow from power sales.
<b>Cash &amp; PTC Leveraged</b>	Equity and Debt	Developer & Institutional Investor	Similar to the Cash Leveraged structure, but the loan size and amortization profile are based on cash flow from power sales plus a monetization of the projected PTCs from the project.
<b>Back Leveraged</b>	All Equity (Developer uses debt outside project)	Developer & Institutional Investor	Virtually identical to the Institutional Investor Flip, but with the developer leveraging its equity stake in the project using debt financing, housed at a company level.

# Corporate Structure



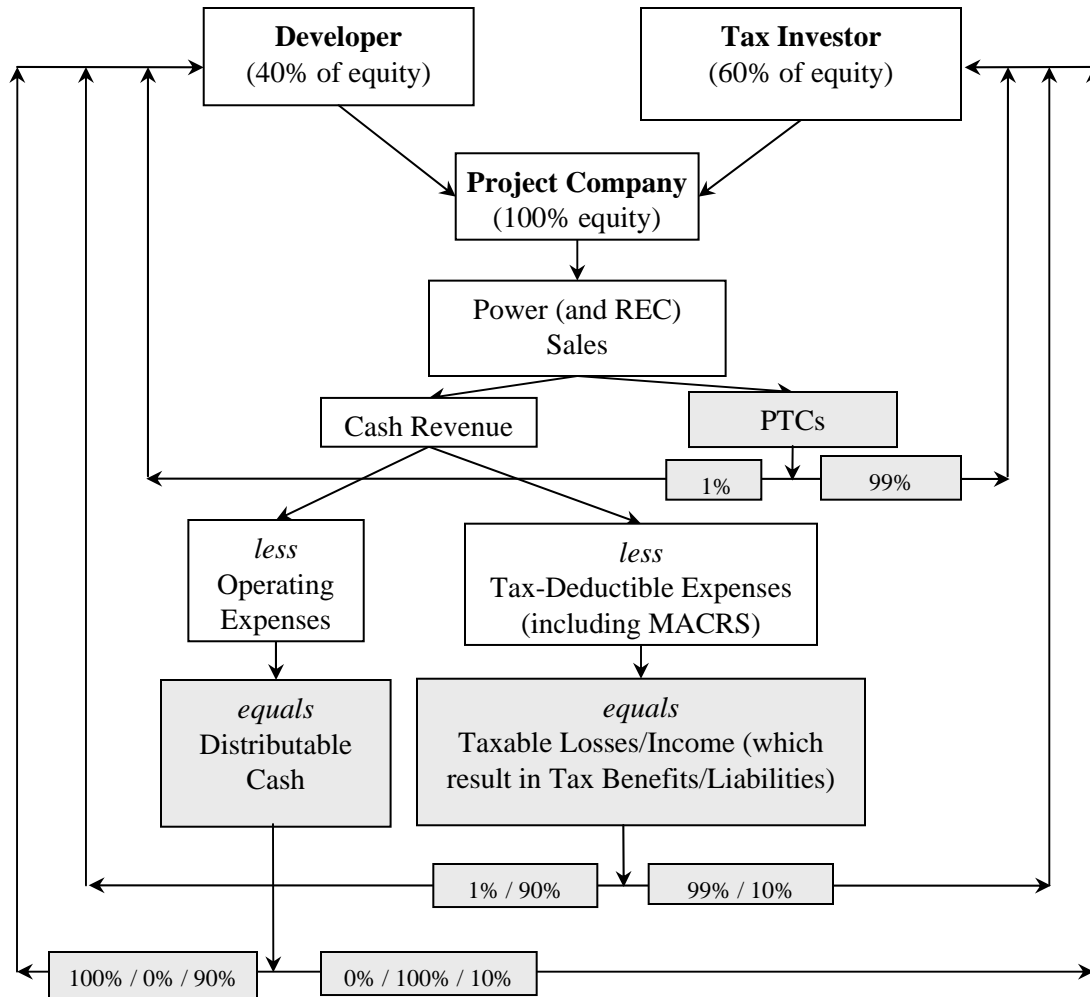
- All-equity structure with one investor.
- Corporate parent funds 100% of the costs of the project as equity in the project company.
- 100% of each benefit stream flows to parent:
  - Distributable cash.
  - Tax Benefits: (a) taxable losses and gains, and (b) PTCs.
- With just one investor, there is no “flip” in the allocation of cash and Tax Benefits.

# Strategic Investor Flip



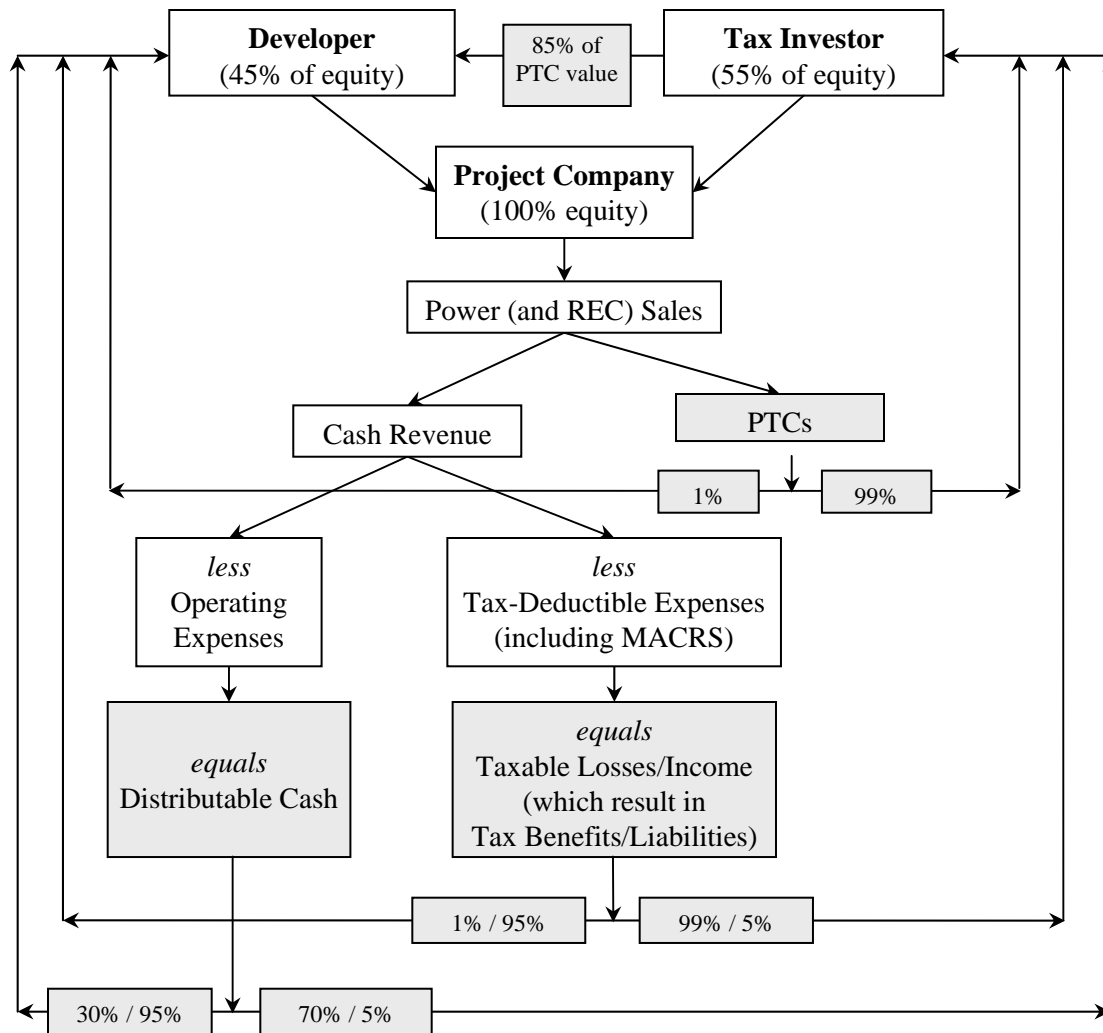
- All-equity structure with two owners.
- Tax Investor (“TI”) provides vast majority (e.g., 99%) of equity.
  - Note, TI can be either Strategic or Institutional.
- Each party receives a pro rata share of the cash and Tax Benefits until TI IRR target (“Flip Point”) is reached.
- After Flip Point is reached, virtually all allocations go to developer.
- Note, the first percentage figure in each box is the pre-flip allocation, the second is the post-flip allocation.

# Institutional Investor Flip



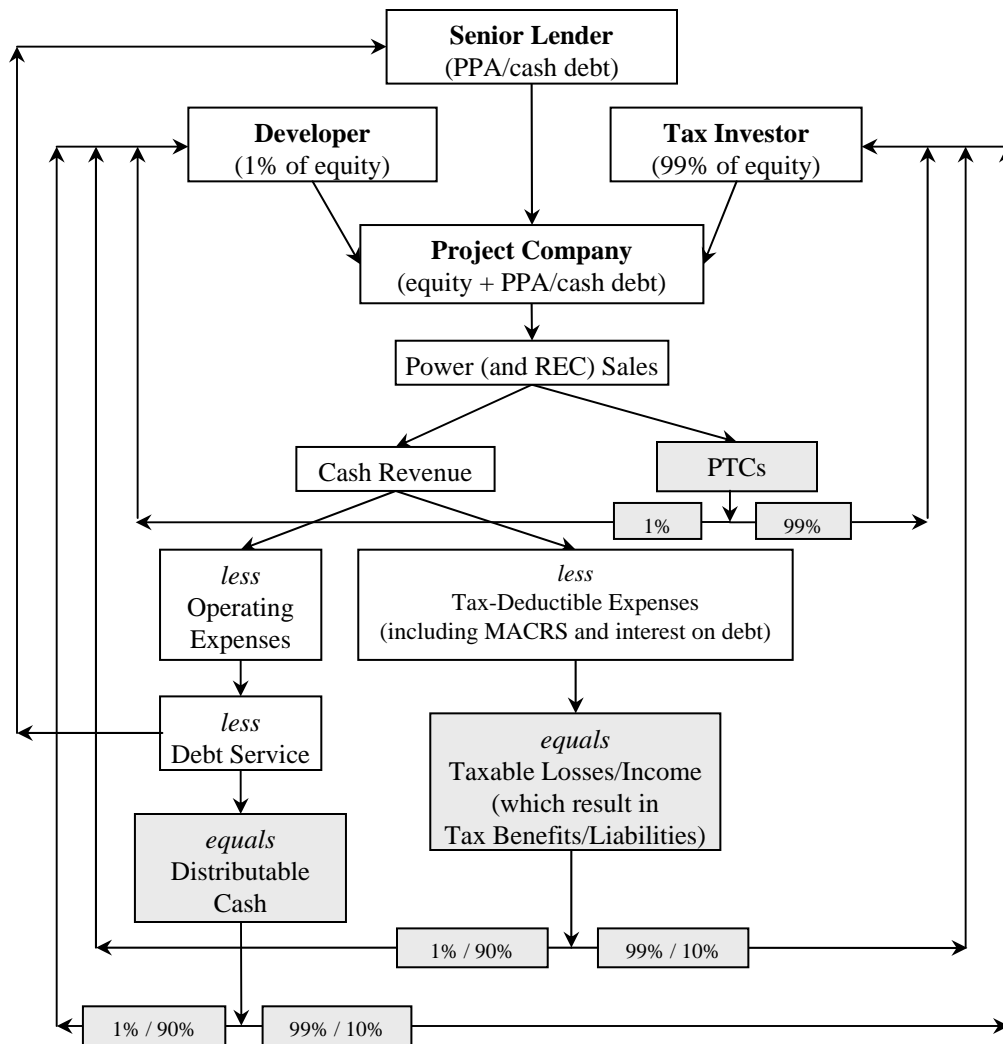
- All-equity structure with two owners.
- TI provides a majority (e.g., 60%) of equity.
- Pre-Flip Point, there are bifurcated allocations:
  - Cash: initially 100% to developer until return of investment; then 100% to TI.
  - Tax Benefits: 99% to TI and 1% to developer.
- After Flip Point is reached, virtually all allocations go to developer.

# Pay-As-You-Go (PAYGO)



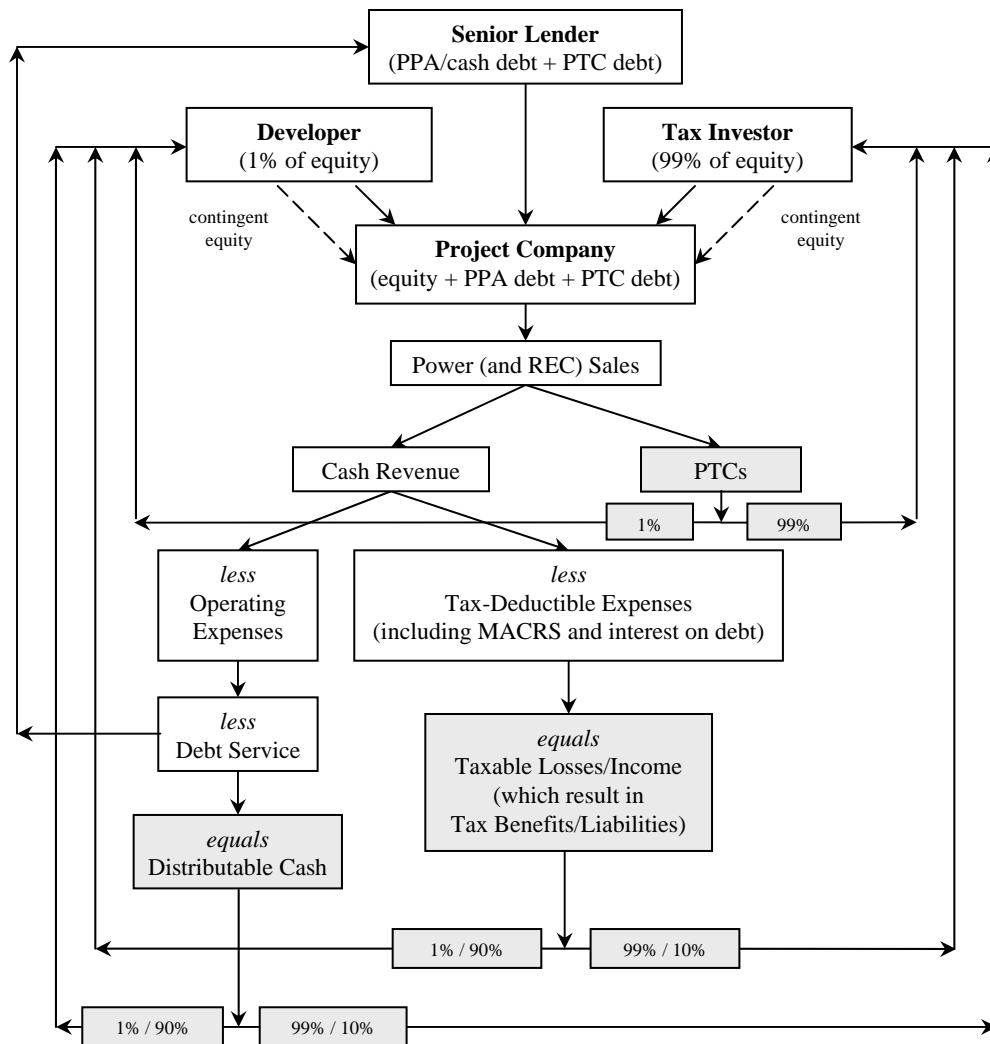
- All-equity structure with two owners.
- TI provides a majority (e.g., 55%) of equity up-front.
- TI makes additional payments as PTCs are generated, based on value of PTCs (e.g., 85%).
  - Most often payments are made directly to the developer.
- Pre-Flip Point, TI receives virtually all of the Tax Benefits and a majority (e.g., 70%) of the cash.
- Post-Flip Point, virtually all allocations go to developer.

# Cash Leveraged



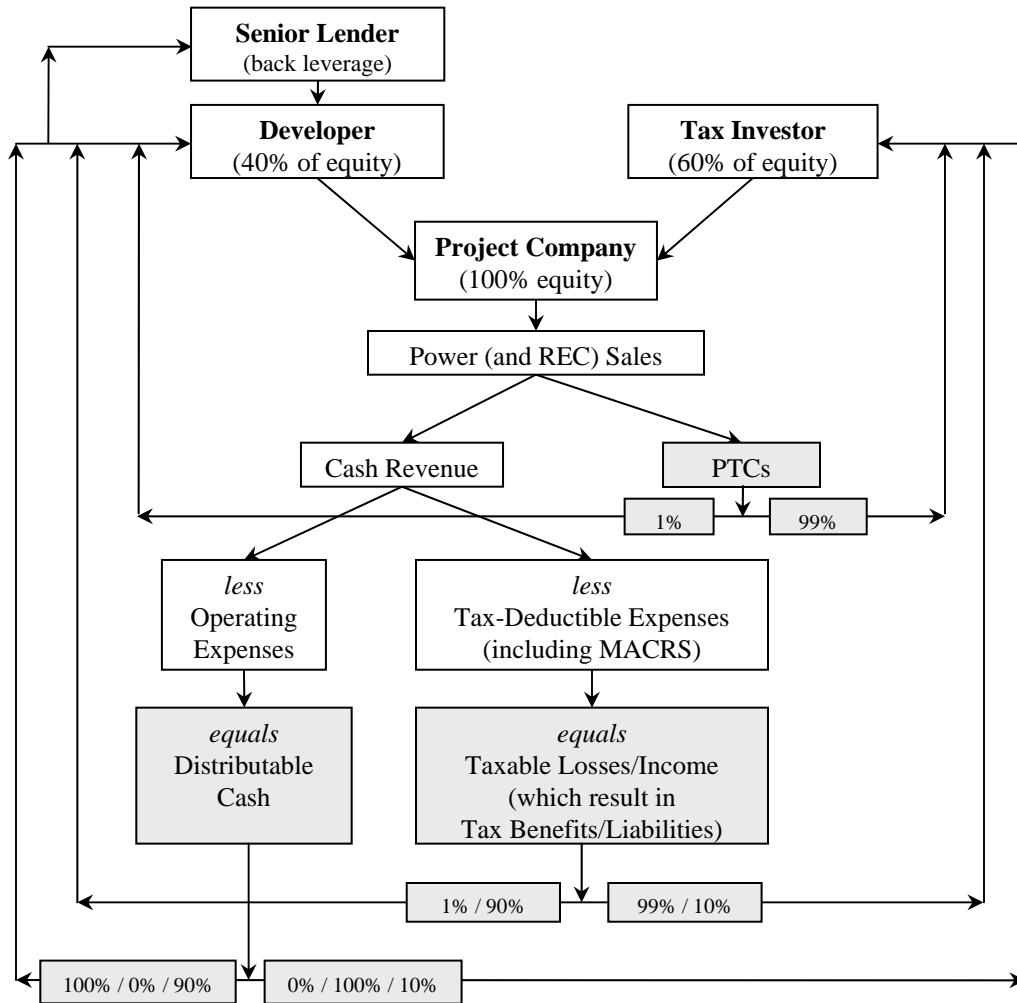
- Two equity owners and project-level debt based on cash generated.
- Lenders have first lien on project assets.
- TI provides vast majority (e.g., 99%) of equity.
- Each party receives a pro rata share of the cash (after debt service) and Tax Benefits until Flip Point.
- After Flip Point is reached, virtually all allocations go to developer.
- Note: interest payments are tax-deductible, thereby decreasing taxable income.

# Cash & PTC Leveraged



- Two equity owners and project-level debt based on cash and projected PTCs generated.
- Lenders have first lien on project assets.
- Equity parties guarantee additional annual equity contributions, if necessary, to cover shortfall caused by PTC debt.
- TI provides vast majority (e.g., 99%) of equity.
- Each party receives a pro rata share of the cash (after debt service) and Tax Benefits until Flip Point.
- After Flip Point is reached, virtually all allocations go to developer
- Note: interest on both tranches of debt is tax-deductible.

# Back Leveraged



- All-equity structure with two owners, similar to Institutional Investor Flip structure.
- TI provides a majority (e.g., 60%) of equity.
- Developer funds part of its equity with debt borrowed at its company-level, outside of the project.
- Pre-Flip Point bifurcated allocations:
  - Cash: initially 100% to developer until return of investment; then 100% to TI.
  - Tax Benefits: 99% to TI and 1% to developer.
- After Flip Point is reached, virtually all allocations go to developer.

# Choosing a Structure

- Developers decide which financing structure best meets their needs for a given project based on multiple considerations.
- The table below lists several non-exhaustive scenarios with differing combinations of these developer considerations.

Scenario	Developer can use Tax Benefits	Developer can fund project costs	Developer wants to retain ownership stake	Developer wants early cash distributions	Project has low estimated IRR	Existing project (refinancing/acquisition)	Most suitable financing strategy or structure
1	No	No	No	Yes	N/A	No	Sell Project
2	Yes	Yes	Yes	No	No	No	Corporate
3	No	Limited	Yes	No	No	No	Strategic Investor Flip
4	No	Limited	Yes	Yes	No	No	Institutional Investor Flip
5	No	Limited	Yes	No	Yes	No	Cash Leveraged or Cash & PTC Leveraged
6	No	Limited	Yes	Yes	No	Yes	Institutional Investor Flip
7	No	Yes	Yes	Yes	N/A	Yes	Pay-As-You-Go
8	No	Limited	Yes	Yes	Yes	No	Back Leveraged

# Observations

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- Financing structures have evolved to meet specific developer needs and investor requirements, and this evolution will continue as long as the sector attracts new investment capital.
- After being out of favor, leveraged structures seem to be gaining popularity.
  - Rising turbine and interconnection costs put pressure on returns (need leverage boost).
  - Longer-term PTC eligibility window allowing for the time needed to negotiate debt.
  - Tax Investors gaining comfort with bringing on lenders.
- Recent developer consolidation trend will have several implications:
  - Creates larger developers with greater financial resources who can de-link project financing from construction deadlines, allowing the use of new financing tools such as portfolio finance.
  - Influx of foreign capital with little U.S. tax liability means passive Tax Investors will still be required to monetize Tax Benefits.
- In some markets (e.g., Texas, New York), investors are becoming increasingly comfortable with commodity hedges in lieu of long-term PPAs.
- Portfolio financings are gaining popularity.

# Deacon Harbor Financial

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- Deacon Harbor provides financial advisory and analytical services to clients in the renewable and alternative energy sectors.
- The firm's client list includes equity investors, developers, investment banks, municipalities, state agencies, cooperatives and numerous private entities.
- The management of Deacon Harbor has advised on debt and equity transactions with a combined investment value of over \$800 million dollars.
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