2019 Deloitte Renewable Energy Seminar
Powering a bright future
October 2-4, 2019
Structuring and financing considerations for tax equity

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Structuring and financing optimization considerations
Overview
The renewable energy industry is complex, with projects producing cash distributions, taxable income or losses, tax credits, and GAAP earnings due to the regulatory and tax environment.

OUTLINE:
• Project funding sources
• Introduction to primary players
• Stakeholder key metrics:
  ✓ Developers – short-term investment horizon, developer fee
  ✓ Owner Operators– long-term investment horizon, cash-on-cash yield, Internal Rate of Return (IRR), contracted cash flows and upside
  ✓ Tax Equity – medium term investment horizon, tax credits, tax losses
  ✓ Debt financiers – risk adjusted debt sizing and repayment profiles, interest income
• Considerations in financing optimization across different tax equity structures
• Considerations in debt sculpting optimization
• Consideration of future state impact of tax equity and debt raising
Project funding sources

There are various considerations of project financing for developers and asset owners.
Specific drivers of value
There are many attributes of a renewable energy project that needs to be assessed in considerations of returns to stakeholders

Key Return Metrics
After-tax IRR, ITC
Amount, Accelerated Depreciation, Developer Fee
Introductions to the primary players
Each stakeholder has their own investment goals and metrics that they use to evaluate their investments

**Developer**
- **Role:** Manages the project from the early stages through NTP or COD.
- **Goal:** Maximize their developer fee and quickly sell developed projects.
- **Metrics:** Developer fee = sale value – costs incurred

**Owner / Operator**
- **Role:** Long-term owner of the project.
- **Goal:** Maximize project returns by optimizing the capital stack, efficiently operating the projects and accurately tracking performance.
- **Metrics:** Pre- and after-tax IRR, Cash-on-Cash yield

**TEI**
- **Role:** Investor who can monetize the tax credits and benefits more efficiently than owner/ operator.
- **Goal:** Use tax credits and tax benefits produced by the project to offset taxable income.
- **Metrics:** After-tax IRR, ITC eligibility, accelerated depreciation
Overview of tax equity structures

The regulatory and tax environment call for complex structures and arrangements to allow the different players to maximize the potential benefits a project produces.

**Partnership Flip**
- Owner & TEI own interests in the LLC that grant them rights to cash distributions, taxable income / (losses) and tax credits that change over time.
- The change in these rates is called a Flip. The mechanics of the flips depend on the type of partnership flip and the Investors goals and needs.

**Sale Leaseback**
- In this structure, the Owner sells the ProjectCo to the TEI, who then leases it back to the Cash Equity Investor.
- The TEI is then acting as the Lessor, and the Cash Equity Investor the Lessee.
- The Lessor receives cash rent, the ITC and the tax depreciation benefits and the Lessee receives the Project EBITDA.

**Inverted Lease**
- The most complicated of the three structures, this is essentially two partnership flips with a lessor-lessee relationship between the two.
**Partnership flip overview**

**Key transaction considerations**

- **The cash equity** will own the asset as a developer or purchase the project from a developer. Cash equity will contribute the asset to a partnership.

- **The tax equity investor** will contribute cash capital. This capital is distributed to cash equity as a return of capital.

- **TEI contributions are sized typically sized** in order for TEI to meet their investments metrics.

- Tax equity investor is allocated as much as 99% of tax items and subsequently “flips” after achieving a predetermined return.

- Cash equity is allocated majority of cash to recover equity investment through cash and generate **cash yields**.

- Cash equity may exercise option after the flip to have **tax equity exit** the partnership.
Partnership flip simple example

The TEI receives 99% of the tax credits and taxable losses in the pre-flip period. Project’s tax depreciation typically leads to tax losses in the early years.

<table>
<thead>
<tr>
<th>Contributions</th>
<th>Pre-Flip</th>
<th>Post-Flip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Equity</td>
<td>TEI</td>
<td>Cash Equity</td>
</tr>
<tr>
<td>Project</td>
<td>Multiple tax credits or % of capital</td>
<td>Potential to buy-out the TEI</td>
</tr>
<tr>
<td>Tax credits</td>
<td>1%</td>
<td>99%</td>
</tr>
<tr>
<td>Cash distributions</td>
<td>&gt;50%</td>
<td>&lt;50%</td>
</tr>
<tr>
<td>Taxable Income / (losses)</td>
<td>1%</td>
<td>99%</td>
</tr>
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**Date-based Partnership Flip:** In a date-based Flip, the Flip timing is determined by a set schedule. There can be several “flips” prior to the final flip date.

**Yield-based Partnership Flip:** There may be date flips prior to the final flip, which is determined as the date at which the TEI achieves a target after-tax IRR.
Key structuring optimization considerations – partnership flip
Both cash equity and tax equity will be looking to optimize their return metrics as the parties negotiate the amount of tax equity capital to be sized

**Cash Equity Investor**

- Maximize the amount of TEI and debt capital raised to finance the project, without sacrificing too much of the cash distributions
- Manage the project efficiently to ensure consistent long-term cash flows (cash on cash yields)
- Negotiate a favorable buy-out of the TEI
- Looking to achieve unlevered IRRs north of 6%

**Tax Equity Investor**

- Structure the partnership so that they take on as much of the tax benefits and tax credits as they can absorb
- Minimize the amount of the stop-loss reallocations. Can achieve this by increasing the DRO or by structuring the allocations of taxable income / (losses) strategically
- Maximize the partnership efficiency
- For yield-based flips, they need to hit the target after-tax IRR by a target date
Considerations in sizing tax equity
There are a number of factors that need to be considered when deciding upon optimal tax equity terms

**Partnership efficiency**- Given the disproportionate allocations of cash and tax, there is pressure put on the partners’ capital accounts and outside basis which may lead to tax inefficiencies. It's typical that the TEI will always achieve their target IRR. Any inefficiencies will be born by the cash equity, and accordingly should size to make the partnership as efficient as possible.

**Cash Equity Cash Yields**- Is enough cash distributed to cash equity pre-flip to meet dividends and shareholder requirements

**GAAP Earnings Profile**- Understand the HLBV profile of the partnership and how this impacts GAAP earnings

**Determining the partnership terms**- Determining the right TEI contributions, tax allocation waterfall, and cash allocation waterfall is critical to optimize for above and other factors

**TEI contributions and cash waterfall**- Often the area of focus given TEI will most of the tax allocation to them

**TEI contribution terms**- may depend on if it's a yield or date-based flip, and also if a PAYGO structure is preferred (applicable for PTC projects)
Common pros and cons of a partnership flip

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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</thead>
<tbody>
<tr>
<td>• Only structure available for IRC Section 45 PTC property</td>
<td>• Tax inefficiencies</td>
</tr>
<tr>
<td>• Simplest structure that can allow cash equity to be an owner/operator a while disproportionately allocate the tax benefits to a third party</td>
<td>• ITC claimed on cost basis rather than stepped up FMV, if the cash equity has stepped up through to FMV through a sale they may be subject to tax on the gain</td>
</tr>
<tr>
<td>• TEI involvement mainly limited to monetization of tax benefits (i.e., no operations or leases)</td>
<td>• Large pre tax earnings hit to TEI in the first year (for ITC deals)</td>
</tr>
</tbody>
</table>
Sale leaseback overview

Key transaction considerations

- The Cash Equity Investor sells the ProjectCo to the TEI at COD
- The TEI then leases the Project back to the Cash Equity Investor for a term typically less than useful life
- The TEI receives contractually obligated rent payments, 100% of the ITC and 100% of the depreciation benefits as a result of the lease relationship and their ownership of the project
- The Cash Equity Investor receives the project EBITDA during the lease term, and will typically seek to buy back the project at the end of the lease term from the TEI
### Developer / Cash Equity Investor

- Receive up to 80% of the upfront capital requirements from the TEI. Typically, there is a rent prepayment, which can be up to 20% of the purchase price. Essentially significant capital commitment will be delayed until TEI buyout.
- Minimize the amount of tax losses they are exposed to because of the TEI’s ownership of the Project.
- Cash yields will be low before TEI buyout as a result of the rental payments.
- Will assess their investment based on their overall returns (IRR), which must be inclusive of the cash rent payments.

### Tax Equity Investor

- As they own the project, they have rights to 100% of the ITC and depreciation benefits. The TEI must be careful that they are still able to offset these additional benefits with taxable income elsewhere in their company.
- TEI gets contractually obligated rent payments. While the lease terms are typically structured to be in line with the contracted PPA terms, the lease terms are fixed at the lease inception date, which provides assurances on their cash flows.
- TEI will be required to deploy more capital than a partnership but will receive higher cash inflow.
Considerations in sizing sale leaseback transactions
There are a number of factors that need to be considered when deciding on optimal SLB terms

**Rent Sizing**- Determining the appropriate cash rent schedules

**Rent Prepayment Sizing**- Rent prepayment is a means of cash equity putting capital in to the structure. As an eventual owner/operations of the asset, it is preferred for cash equity to have some invested capital in the structure

**Tax Equity Buyouts**- TEI will look to exit the structure at the end of the lease at which point they will sell the asset back to cash equity. Often terms of a buyout are documented at inception.

**Early Buyout (EBOs)**- Terms may allow for EBOs of TEI before the lease end. However, it is typical that EBOs do not occur prior to five years from the Placed in Service date to avoid ITC recapture issues

**S 467 tax implications**- Recovery of the rent prepayment under tax rules is subject to s 467, and accordingly, this should be captured when assessing tax profiles for both parties
Common pros and cons of a sale leaseback

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 100% financing secured by PPA</td>
<td>• Tax equity is required to put in a much lager capital commitment initially (recovered upon exit)</td>
</tr>
<tr>
<td>• Tax structure risk is low</td>
<td>• The market for TEI with capital and depreciation appetite for a SLB structure is smaller</td>
</tr>
<tr>
<td>• Tax equity insulated from technology and operations risk (as asset is leased back to cash equity)</td>
<td>• Basis reduction = 85% of eligible cost basis depreciated</td>
</tr>
<tr>
<td>• ITC equals 30% of FMV (equal to purchase price)</td>
<td>• Cash equity is subject to lower cash distributions than other structures</td>
</tr>
<tr>
<td>• No tax inefficiencies (cleanest structure)</td>
<td>• Cash equity may prefer to deploy more capital</td>
</tr>
</tbody>
</table>
Inverted lease overview
An inverted lease is two partnerships with a lease arrangement

Developer leases the project to the TEI, who then sells the electricity produced by the project and uses the proceeds to pay rent for the use of the project.

Developer elects to pass through the ITC to the Investor/Lessee in accordance with Section 48(d). The developer is often able to transfer the ITC at FMV without a taxable gain.

Investor/Lessee receives benefits of tax credits and deductions for rent paid to the Developer/Lessor.

Lessor receives depreciation deductions, which are used to offset taxes paid on the rental income received from the Investor/Lessee.

The structure allows for bifurcation of the ITC and depreciation, allowing for more flexibility in allocations of benefits.
### Key structuring optimization considerations – Inverted lease

#### Cash Equity Investor

- Initial cash contributed from tax equity to cash equity will be lower than a partnership flip, as this comes in the form of a rent prepayment
- Cash equity cash profile is subject to the rent schedule sized between the Lessor and the Lessee
- Cash equity will typically structure the terms based on the after tax returns and consideration of the rental profile
- Increase value in this structure due to transfer of ITC to TEI at FMV with no taxable gain

#### Tax Equity Investor

- More flexibility to structure their returns to their particular tax and cash appetite with the additional levers
- Can structure so that they only receive the ITC if they don’t have the tax appetite to absorb the taxable losses associated with depreciation
- Contractually obligated cash distributions due to the lease arrangement
Considerations in sizing inverted lease transactions
There are a number of factors that need to be considered when deciding on optimal Inverted Lease terms

**Rent Sizing**- Determining the appropriate cash rent schedules

**Rent Prepayment Sizing**- Rent prepayment is a means of TEI putting capital in to the structure. Cash equity would prefer to increase the rent prepayment as much as possible

**Cash Equity Cash Yields**- Is enough cash available to cash equity in the lease period from rental payments to meet dividends and shareholder requirements

**Early Lease Terminations**- Terms may allow for early lease terminations for TEI before the lease end (typically would not occur within five years from PIS due to ITC recapture issues)

**S 467 tax implications**- Recovery of the rent prepayment under tax rules is subject to s 467 and accordingly this should be capture when assessing tax profiles for both parties
## Common pros and cons of an Inverted Lease

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td>• ITC equals 30% of FMV (rather than cost basis)</td>
<td>• Structural complexity and administration is often a deterrent in the market</td>
</tr>
<tr>
<td>• Lower exit cost (sponsor retains property at end of lease)</td>
<td>• Tax structure risk can be higher (but see Rev. Proc. 2014-12)</td>
</tr>
<tr>
<td>• Can be more efficient use of depreciation benefits</td>
<td>• Tax equity NOT insulated from technology and operations risk</td>
</tr>
<tr>
<td>• No basis reduction = 100% of eligible cost basis depreciated (rather than $85)</td>
<td>• Annual income inclusion = 3% of FMV for five years (in lieu of $15 basis adjustment)</td>
</tr>
<tr>
<td></td>
<td>• Cash equity investor will have received less capital from the TEI, initially compared to a partnership flip</td>
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Debt sizing and sculpting
Debt sculpting in the Renewable Energy Industry

Summary and outline

**Debt sculpting** is a common element of project finance models that is typically used when cash flows are known but uneven.

The goal of debt sculpting is to maximize the amount of leverage a project can obtain by matching the size and timing of the principle and interest obligations of a debt instrument to the cash flows of a project.

This approach provides additional assurance to the debt provider that the **project company will be able to meet its obligations** on the repayment dates.

As a result, the **project company can maximize its leverage** and smooth cash flows for distribution to equity holders over time.

**Key Terms:**

- **CFADS:** Cash Flow Available for Debt Service
- **Debt Service:** Principle and interest payments
- **DSCR:** Debt Service Coverage Ratio (CFADS / Debt Service)
Debt sculpting in the Renewable Energy Industry
Maximize leverage by aligning debt service to project cashflow profiles

Take the example of two identical projects, Projects A and B. While they have the same cash flows, Project A uses debt sculpting to raise debt while Project B uses a traditional straight line debt facility.

Both projects draw down the same amount of debt with the same term and interest rate. Based on these assumptions, Project B will fail to meet their debt obligations in the first three years.

Given the same cash flow profiles, Project B would have to elect to take on less debt or risk default.

Project A, through its use of debt sculpting, is able to maximize the amount of leverage it’s able to take on by timing the principle repayments with the cash profile of the project.
Debt sculpting in the Renewable Energy Industry
High level theory

1. **DSCR** = CFADS / Debt Service

2. Given that we know the target DSCR, the debt draw date and the maturity, and the cash flows of the project, we can estimate the amount of debt service in each period to meet that target.

3. CFADS during the debt period = unlevered cash flows during the debt period / Target DSCR

4. Discount the CFADS to present value as of the drawdown date using the interest rate on the debt as the discount rate

5. The NPV of the discounted CFADS becomes the drawdown amount
Debt sculpting in the Renewable Energy Industry
Considering the risk profile of individual revenue streams

What we’ve demonstrated on previous slides is a very simple example of debt sculpting in the industry. The limitation with the simple example is that it treats all cash flows the same.

Revenue streams in renewable projects can vary significantly in the risk of realizing those cash flows, and the industry standard is to consider those risks in the debt sizing process.

Things to consider include:

1. Is the revenue stream contracted or uncontracted?
2. What is the credit quality of the offtaker?
3. Is there policy risk (SRECs)?

The less risky a revenue stream is, the better the terms a project can obtain.
Debt sculpting in the Renewable Energy Industry
Considering the risk of a downside scenario

In addition to the risk profile of the individual revenue streams, consideration for the risk of a general downside scenario is frequently considered when sculpting debt.

To consider a downside scenario, the financial model should calculate the CFADS under both the p50 and p90 scenarios.

The cash flows under the p50 scenario will typically have DSCRs ranging from 1.15x to 2.0x, while the cash flows under the p90 scenario will have coverage ratios of 1.00x. The lower DSCR indicates the lower level of risk of realizing the p90 cash flows compared to the p50 case.

The minimum of the CFADS under P50 and the CFADS under p90, on a period-by-period basis, becomes the final CFADS upon which to size the debt.
Debt sculpting in the Renewable Energy Industry
Viable for both project-level and back-leverage debt

Debt sculpting can be deployed for both project-level debt and back-leverage debt. There are important considerations when sizing each of these financing options for a project.

**Project-Level Debt**

- Project-level debt gets paid out in advance of any equity holders (tax equity, cash equity or sponsor).
- In the setting of a partnership flip, this will trigger the need for additional partnership calculations, such as minimum gain, 752 allocation of debt to partners and 163(j) interest limitation calculations.
- Project-level debt is not typically deployed for projects in a Sale Leaseback structure.

**Back-Leverage Debt**

- Back-leverage debt is subordinate to tax equity, so the CFADS utilized in the sizing of back-leverage debt needs to consider tax equity distributions.
Debt sculpting in the Renewable Energy Industry
Considering the risk of a downside scenario for back-leverage sculpting

The underlying CFADS for back-leverage debt is generally derived as follows:

Project Unlevered Cash Flows

\[ (-) \text{distributions to tax equity} = \text{cash distributed to sponsor} \] (CFADS for Back-Leverage)

As the project unlevered cash flows will be impacted by the p90 downside scenario, so will the tax equity distributions. This is especially true in the case of a yield-flip partnership, where the partnership may actually flip years later than anticipated under the downside case.

With this in mind, it is critical to correctly model the tax equity implications of the downside scenario when sculpting back-leverage debt. The two most common approaches to handle this are:

1) Write a macro in VBA that cycles through the p-Factors and outputs as pasted values the correct tax equity distributions under each scenario

2) Create “shadow” tax equity tabs in the Model that run parallel calculations but rely on different driver information. One partnership for “equity” purposes, and one partnership for the alternate debt case
Debt sizing in the Renewable Energy Industry
Smoothing cash to equity

Debt Sizing is also a method to smooth cash flows to equity holders over time.

As an example, we’ll show two projects, Project A and Project B. These two projects have the same cash flow profile, and are able to draw down the same amount of debt.

Project A, shown in black, works with their debt provider to determine a sculpted set of cash flows, while Project B chooses a straight line repayment product.

Based on the pattern of cash flows, we can see more volatile cash flows to equity given the straight line repayment method, as depicted in the $R^2$ value of the trend lines.
Future state considerations
Future state considerations for tax equity and debt structures

1. How will the phase down of the ITC and PTC impact the structure preferred in the market and considerations of the terms within the structure?

2. How will the phase down impact the demand of tax equity in the market?

3. What will be the impact of new technologies (storage, etc.) and the tax credits assigned to these?

4. What is the trajectory of cost of capital in the market?

4. What are investment vehicles in the market changing?

5. How will regulated utilities play in the market?