Financing Energy Projects
A Primer

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National Renewable Energy Laboratory
April 24th, 2019
Agenda

1. Tribal Roles
2. Sources of Capital
3. Ownership Structures
Paying for the Project

- Three Major Costs/Phases in Energy Project Development
  - **Feasibility:** techno-economic analysis to determine business case for project
  - **Development/Preconstruction:** site control and preparation; permitting; equipment procurement; financial close
  - **Construction:** Equipment delivery; project construction; commissioning testing
Tribal Roles

What benefits can the tribe realize from energy project development and operations?
Initial Considerations

• Project technology?
• Size?
  – Distributed (facility level)?
  – Utility-scale?
• Purpose?
  – Offset utility purchases?
  – Revenue generation?
• Tribal goal?
  – Operating savings? Business opportunity?
Tribal Roles

More Capital Intensive
- Developer/Owner
- Equity Investor
- Lender

Less Capital Intensive
- Off-taker (energy purchaser)
- Land Owner
- O&M subcontractor
## Tribal Business Structures

<table>
<thead>
<tr>
<th>Business Structure Option</th>
<th>Simplicity and Quick Formation</th>
<th>Shield Tribal Assets from Business Liabilities</th>
<th>Avoid Federal Income Taxes</th>
<th>Separate Business from Tribal Control</th>
<th>Ability to Secure Financing</th>
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<tbody>
<tr>
<td>Tribal Instrumentality</td>
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<td>Political Subdivision</td>
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<td>Section 17 Corporation</td>
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<td>Tribal Law Corporation</td>
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<td>State Law Corporation</td>
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<td>LLCs/Joint Venture</td>
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<tr>
<td>LLC (only if Tribe is sole member)</td>
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Sources of Capital

What funds are available for project development and construction?
Energy Project Finance, Generally

Debt  Equity

i.e. Loanership  i.e. Ownership
Financing Options and Sources of Capital

• Cash on hand
• Debt (bonds, project loans, back-leverage, etc.)
• Grants
• Incentives
• Guaranteed savings contracts
• Operating revenues/savings
## Varieties of Capital Sources

<table>
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<tr>
<th></th>
<th>Cash</th>
<th>Loans</th>
<th>Grants</th>
<th>Incentives</th>
<th>Guaranteed Savings Contracts</th>
<th>Operating Revenue/Savings</th>
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<tbody>
<tr>
<td>Reserves and General Funds</td>
<td>Commercial loans or project loans (recourse, or non-recourse)</td>
<td>2019 Infrastructure Deployment on Tribal Lands</td>
<td>Tax incentives (e.g. credits, deductions)</td>
<td>Energy Savings Performance Contracts</td>
<td>Energy sales</td>
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<tr>
<td>Operating revenues from other projects</td>
<td>Loan guarantees (not debt, but improves loan terms)</td>
<td>USDA Community Facilities</td>
<td>Environmental attributes (e.g. RECs)</td>
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<td></td>
<td>PTC</td>
<td>ITC</td>
<td>Accelerated Depreciation</td>
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<td><strong>Value</strong></td>
<td>Tax credit of 0.96¢/kWh</td>
<td>Tax credit of 30% of project costs</td>
<td>Depreciation of eligible costs according to an annual schedule</td>
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<td><strong>Primary Technology</strong></td>
<td>Wind</td>
<td>Solar</td>
<td>Can be taken with either PTC or ITC</td>
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<td><strong>Basis</strong></td>
<td>Energy produced over 10-year period</td>
<td>Eligible project cost. Credit taken at the time the project is placed in service</td>
<td>Qualifying project cost. If used with ITC, basis is reduced by half of the credit (i.e. 85% of qualifying costs)</td>
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</table>
| **Expiration/Step Down** | Phasedown from 2016 - 2019 | Phasedown from 2020 – 2021 | **MACRS:** None  
**Bonus:** phasedown starting in 2023 |
# Securing Debt (Lender Due Diligence)

## General Criteria / Requirements
- Ability to provide reasonable and valuable collateral
- Good credit history for partners in the business
- Experience and industry track record for partners in the business
- Purpose of the loan is sound
- Specified minimum percentage of owner equity invested in the project

## Tribal Criteria / Requirements
- Limited waivers of sovereign immunity
- Tribal court system independent of business and government
- Stable and functional tribal government
- Well understood contract enforcement and dispute resolution system
- Specified minimum percentage of tribal equity invested in the project

## Information Required
- Proof of credit history of the borrower
- Proof of credit history, if available, of the business
- Audited financial statements for the business (existing and projected)
- A detailed and conservative business plan
- Cash flow history and projected cash flow for the business
Ownership Structures

How does the tribe participate in the project structure?
Primarily for facility- and community-scale projects

The tribe is the owner in this structure and self-generates its electricity

Direct Ownership

Project

Tribe purchases an energy system with its own funding and possibly other sources like grants

Over time, investment recouped from utility bill savings

Payments

Remaining Energy Needs

Utility

Tribe and Electricity Users
Ownership w/ Debt

Project

Tribe finances portion or all of project with a loan. Can be recourse or nonrecourse debt.

Debt is serviced from utility bill savings or energy sales.

Lender/Capital Provider

Debt Payments ($/mo.)

Debt Capital $$

Tribe and Electricity Users

Payments

Remaining Energy Needs

Utility

The tribe is still the owner in this structure. Cash flows/savings go partially or entirely to debt service.
Customer agrees to **host** the system and **purchase** the electricity.
Advantages

• No/low up-front costs
• No O&M
• Benefit from tax incentives
• Locked-in energy price
• Path to ownership

Disadvantages

• May not beat current electricity rates
• Tough economics for small projects
• Higher transaction costs
• REC and project ownership requirements

PPA Considerations
Partnership Structure

- **Resource Owner**
- **Lender/Capital Provider**
- **Utility/Off-taker**
- **Project Developer**

**Project Company/Pass-Through Entity**

**Corporations**

**Tax Equity**

**Potential Tribal Role**

**Tax Equity Investors**

- **Income**: 99% Pre-Flip; 5% Post-Flip
- **MACRS and either ITC/PTC**
- **Equity Investment $$ (99%)**

**Utility/Off-taker**

- **PPA ($/kWh)**
- **Income**: 1% Pre-Flip; 95% Post-Flip
- **Developer Equity $ (1%)**

**Lender/Capital Provider**

- **Debt Capital $$**
- **Debt Payments ($/mo.)**

**Resource Owner**

- **Rent/Royalty $$**
- **Access/Site Control**

**Project Developer**

- **Equity Investment $$ (99%)**
- **Income**: 99% Pre-Flip; 5% Post-Flip
Project Waterfall

Project Revenues Received

$ → Project Revenues Account → Project Construction/Operating Expenses

→ Construction / Operating Account

→ Debt Payment Account → Fees, Interest & Scheduled Principal

→ Debt Service Reserve Account → Maintain Required Debt Service Reserve Level
→ Cash Sweep to Lenders

→ Major Maintenance Reserve Account → Maintain Required Major Maintenance Reserve Level

→ Subordinated Debt Account → Payment of Subordinated Debt (if any)

→ Distribution Account → Remaining amount distributed to equity holders (assuming no defaults and financial tests are met)
Appendix
Definitions

• Debt
  – An amount of money borrowed by one person (borrower) from another (lender). A loan. Typically, the debt arrangement will have a stipulated repayment schedule that will allow the borrower to repay the loan in full (the principal) on a regular schedule while also paying interest on top of that principal. In some cases, debt will be collateralized by an asset as a security for the lender.

• Non-recourse debt
  – A source of debt capital in project finance that is collateralized project assets. When debt is collateralized by the borrower’s balance sheet, this is called recourse debt.

• Equity
  – An ownership stake in an asset, commonly purchased through a monetary investment. In project financing, equity is usually in a *subordinate* position to debt. In other words, if the project goes into default, the lender will be paid out from the liquidation of project assets before equity (according to the waterfall of accounts). This makes equity a higher risk investment, but it can also be correspondingly higher reward
Definitions (cont.)

• **PTC (Production Tax Credit)**
  – Tax credit available through Section 45 of the U.S. Internal Revenue Code which provides a tax credit to specified technologies on a generation basis, expressed in ¢/kWh. Wind energy is the primary beneficiary of the PTC

• **ITC (Corporate Investment Tax Credit)**
  – Tax credit available through Section 48 of the U.S. Internal Revenue Code (Section 25D for the personal credit) which provides a tax credit to specified technologies on an investment basis, expressed as a percentage of “qualifying costs” of the capital cost of the project. Solar PV is the primary beneficiary of the ITC

• **MACRS (Modified Accelerated Cost Recovery System)**
  – Accelerated depreciation of assets available through Section 168 of the U.S. Internal Revenue Code. MACRS for renewable energy projects follows a five-year schedule and allows investors to take heavy tax losses with which they can offset their taxable income
Resources – Tribal Business Structures


- **Tribal Business Structure Handbook** (The Office of the Assistant Secretary – Indian Affairs U.S. Department of Interior)

- **Structuring Tribal Business Enterprises and Joint Ventures** (Kathleen M. Nilles, and Karen J. Atkinson)

- **Tribal Energy Development Primer** (Quapaw Tribe of Oklahoma)
Resources – Project Finance and PPAs

• **Project Finance – A Primer** (Corporate Finance Institute)  
  [https://corporatefinanceinstitute.com/resources/knowledge/finance/project-finance-primer/](https://corporatefinanceinstitute.com/resources/knowledge/finance/project-finance-primer/)

• **Project Finance for Renewable and Clean Technologies**  
  (Wilson Sonsini Goodrich & Rosati LLP)  

• **Power Purchase Agreements** (U.S. Department of Energy)  
Thank you!

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