

DOE OFFICE OF INDIAN ENERGY

Renewable Energy Project Financing

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National Renewable Energy Laboratory



U.S. DEPARTMENT OF
ENERGY

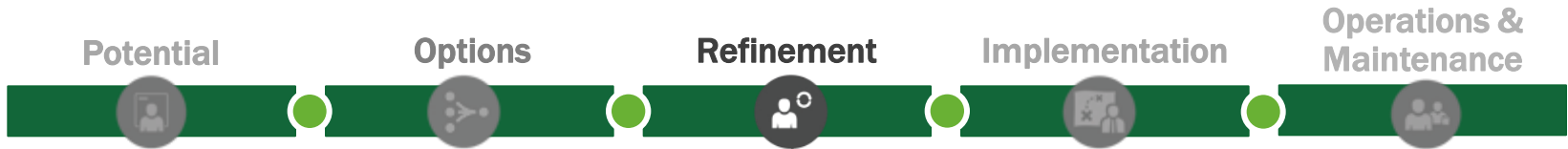
Office of
Indian Energy



3 Refinement

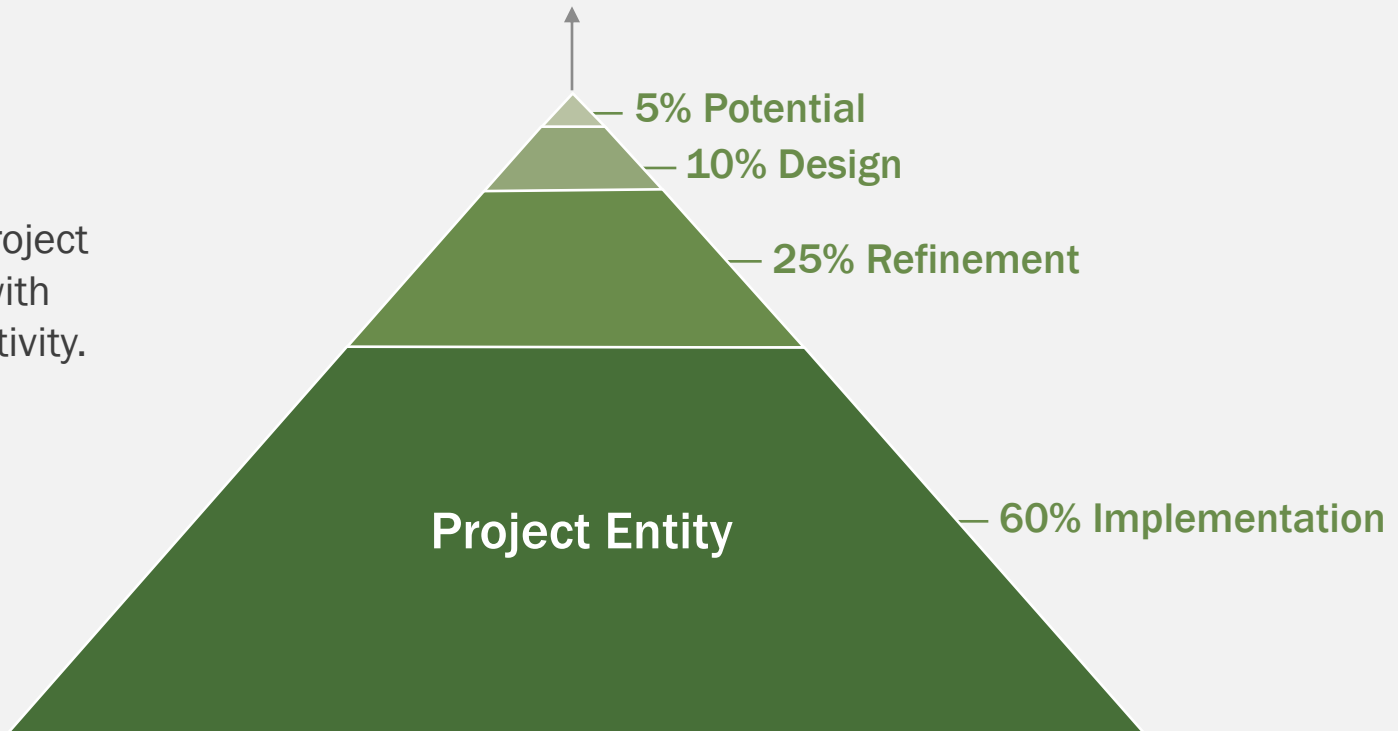


What is a “Project”?



Parent Entity

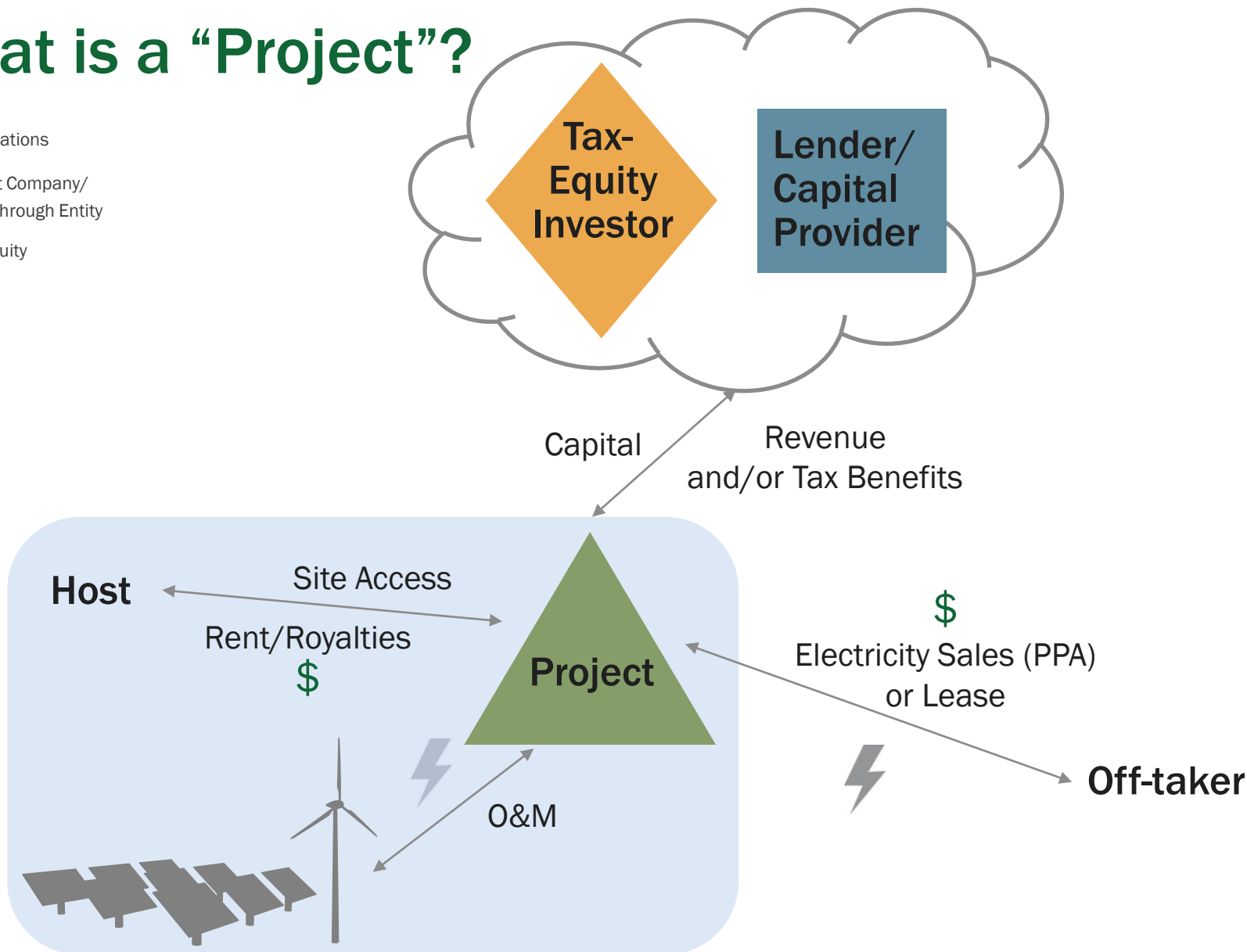
A completed project is a business with commercial activity.



Project Development Stages – % Resource Inputs, Time/\$

What is a "Project"?

- Corporations
- ▲ Project Company/
Pass-Through Entity
- ◆ Tax Equity

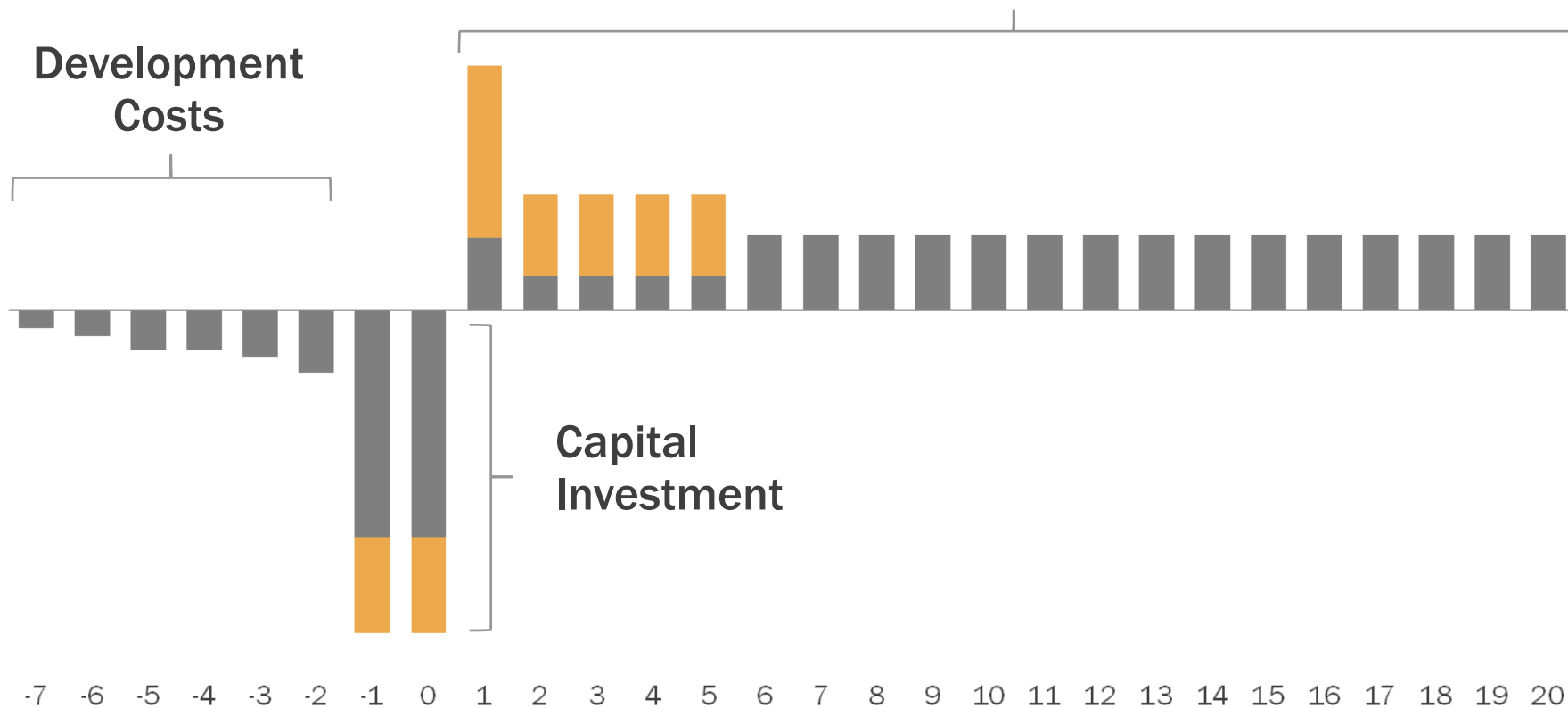




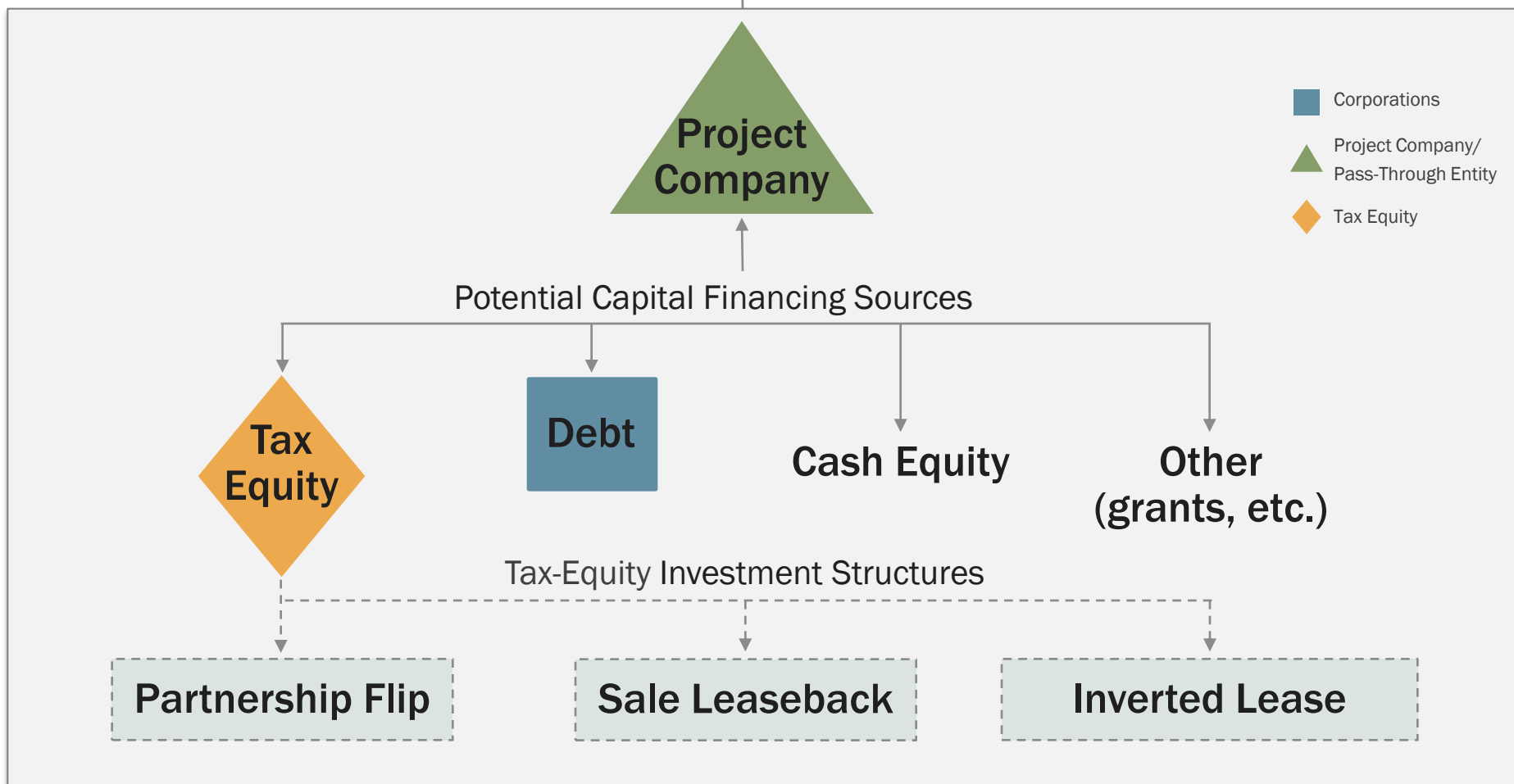
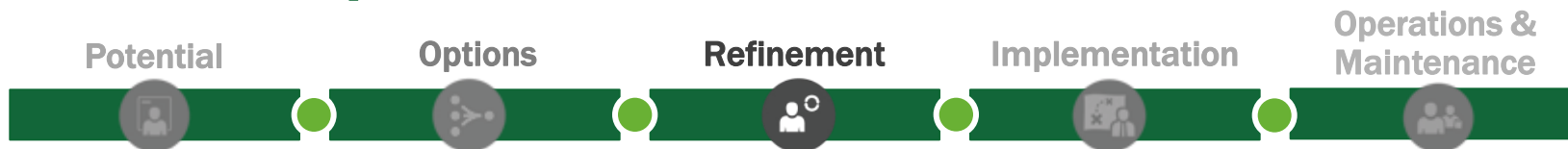
What is a "Project"?



Cash Flows



Finance Options





■ Federal Tax Incentives

- Production Tax Credit (PTC)
- Investment Tax Credit (ITC)
- Modified Accelerated Cost Recovery System (MACRS) and bonus depreciation

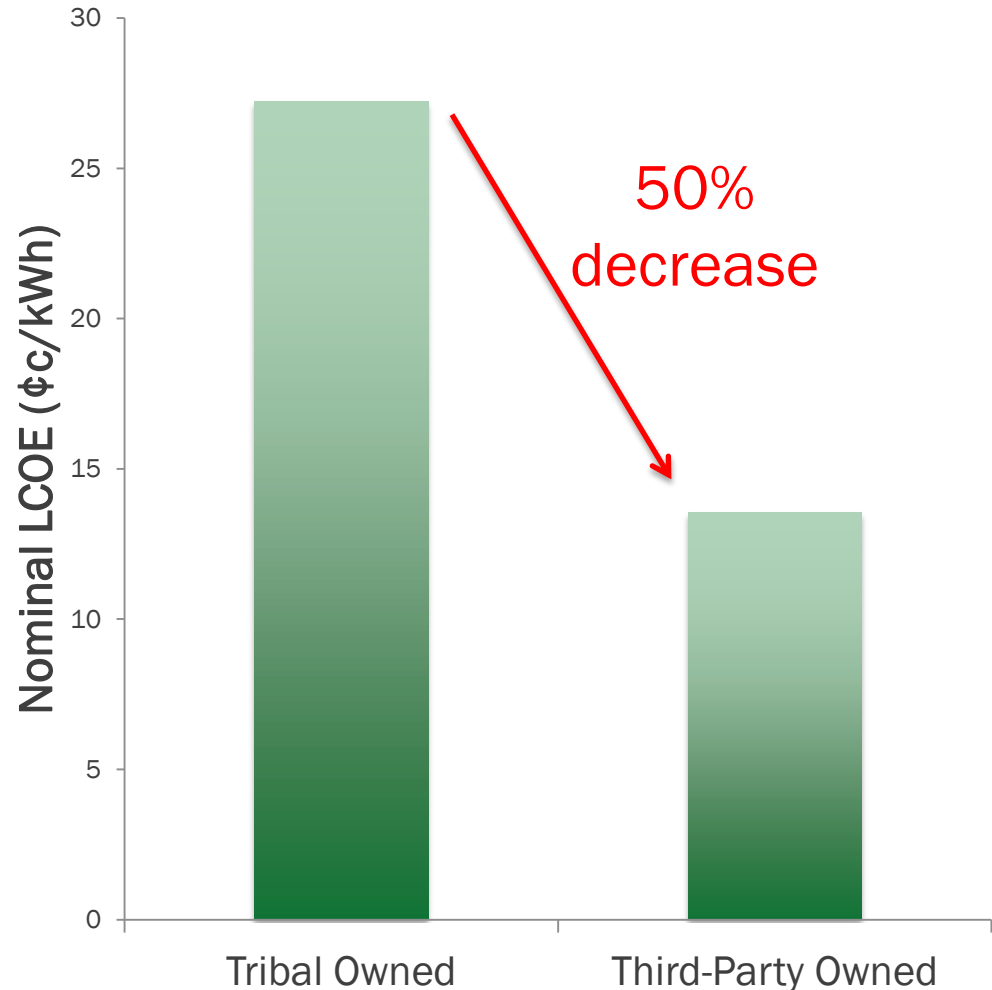
Third-Party (i.e. Tax Equity) vs. Tribal Ownership

Tribal Owned (Without Incentives)

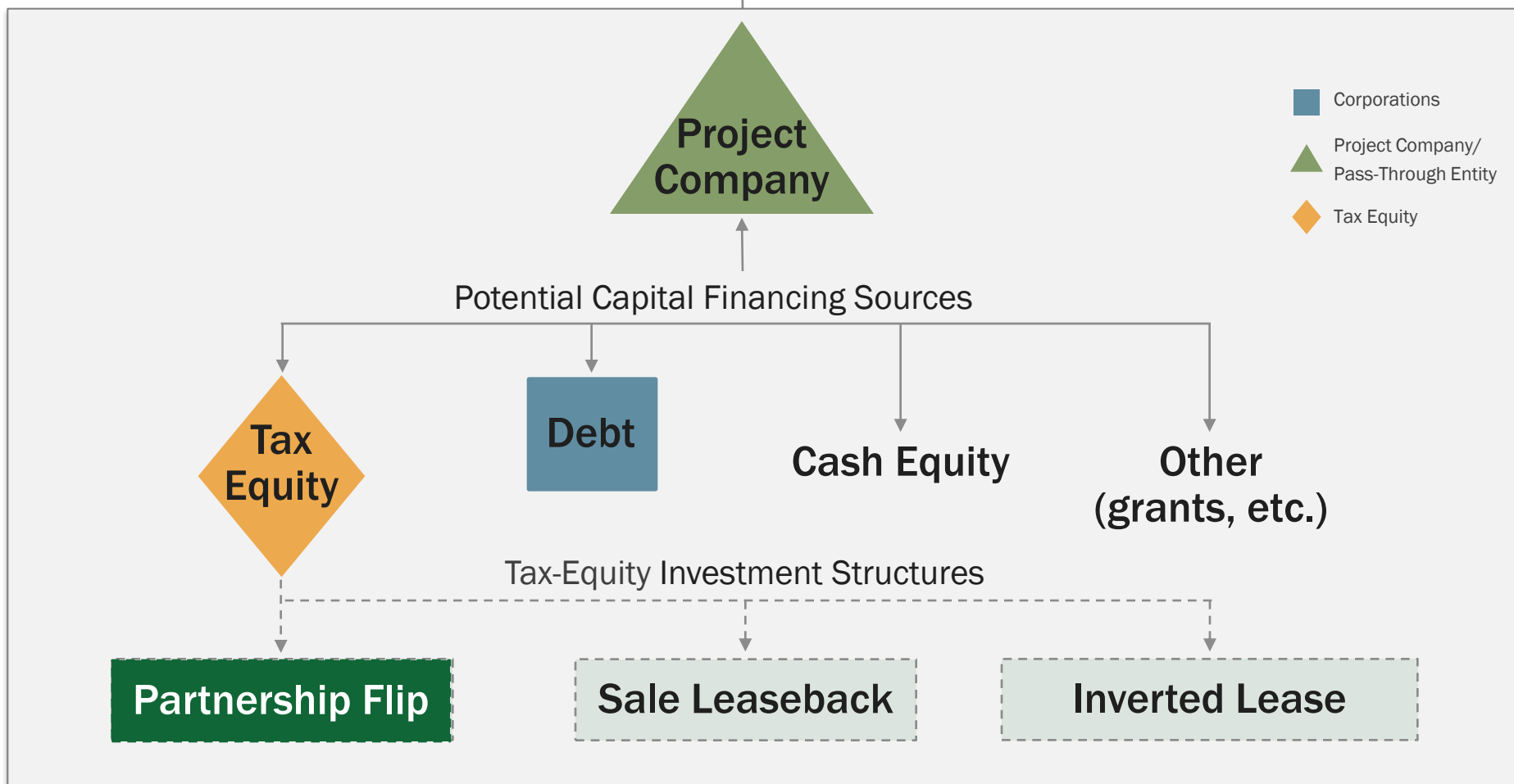
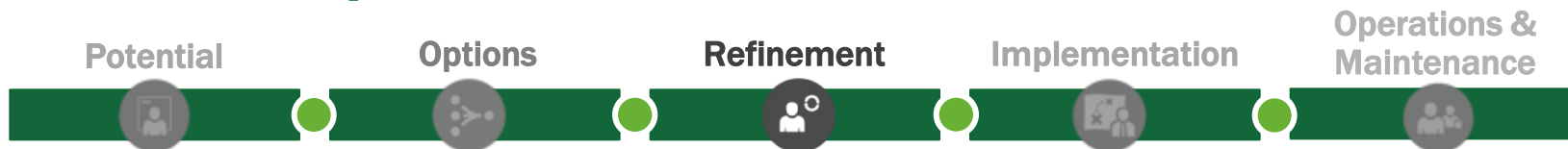
Metric	Base
Annual Energy	37,230,428
PPA price	25.36 ¢/kWh
LCOE Nominal	27.22 ¢/kWh
LCOE Real	22.11 ¢/kWh
Internal rate of return (%)	12.00 %
Minimum DSCR	3.36
Net present value (\$)	\$ 2,386,955
Calculated ppa escalation (%)	1.00 %
Calculated debt fraction (%)	50.00 %
Capacity Factor	21.3 %
First year kWhac/kWdc	1,862
System performance factor (%)	0.82

Third-Party Owned (With Incentives)

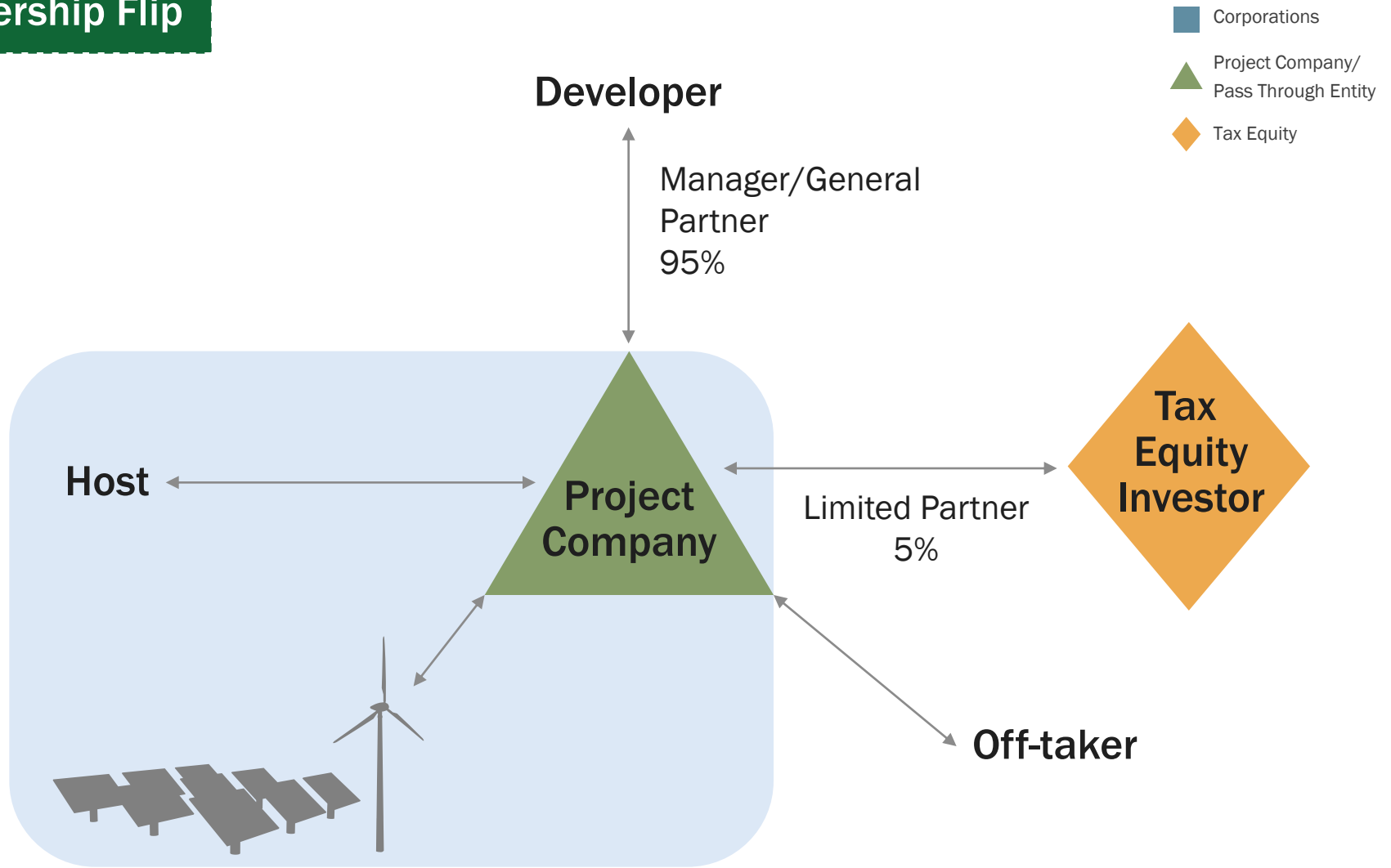
Metric	Base
Annual Energy	37,230,428
PPA price	12.62 ¢/kWh
LCOE Nominal	13.55 ¢/kWh
LCOE Real	11.00 ¢/kWh
Internal rate of return (%)	21.11 %
Minimum DSCR	1.57
Net present value (\$)	\$ 6,525,698
Calculated ppa escalation (%)	1.00 %
Calculated debt fraction (%)	50.00 %
Capacity Factor	21.3 %
First year kWhac/kWdc	1,862
System performance factor (%)	0.82



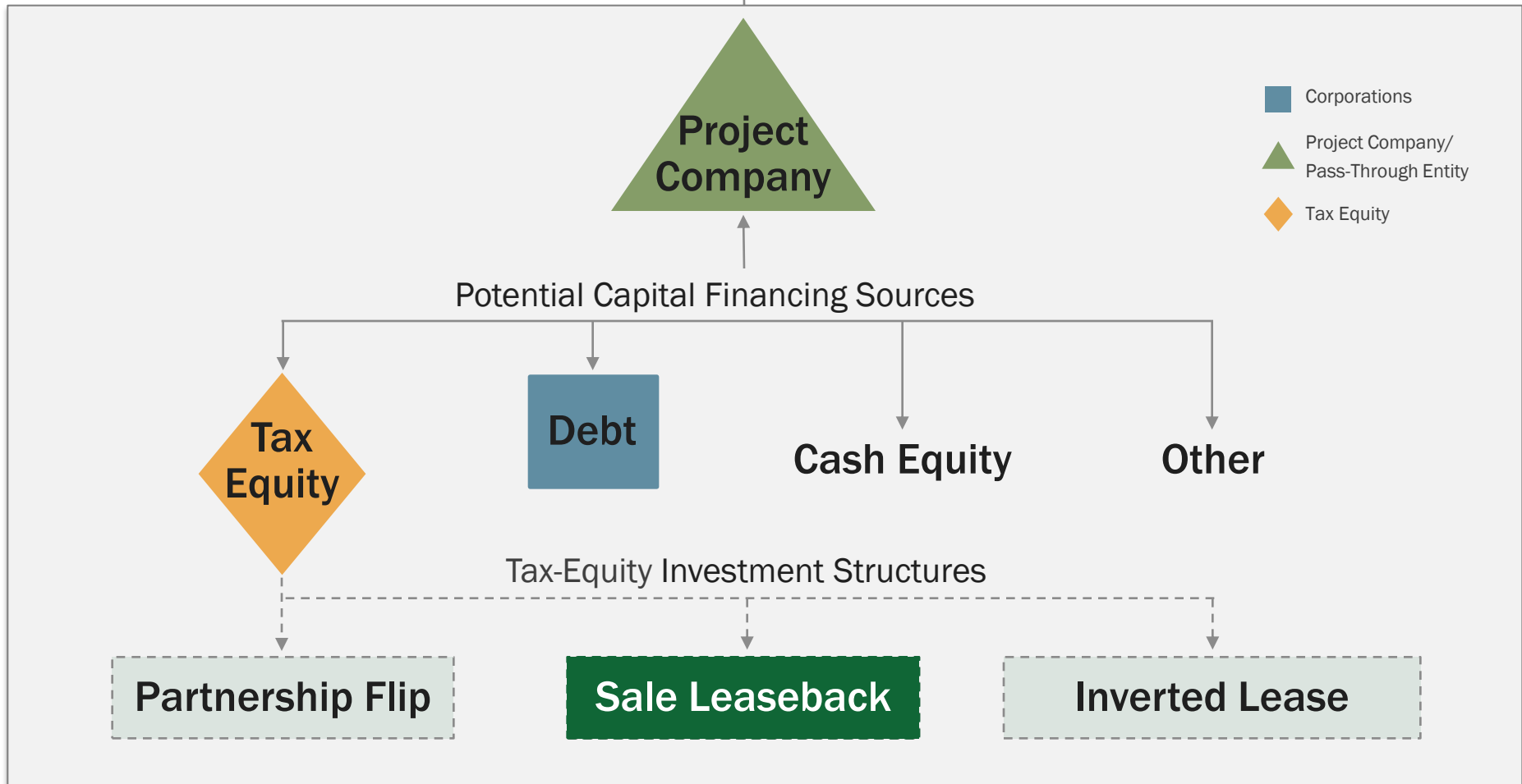
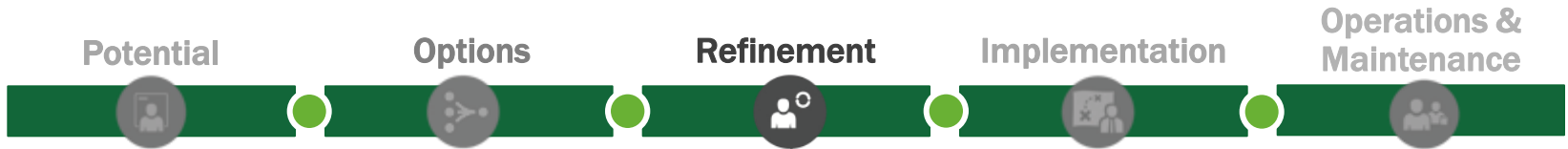
Finance Options



Partnership Flip



Capital Structure with Tax Equity

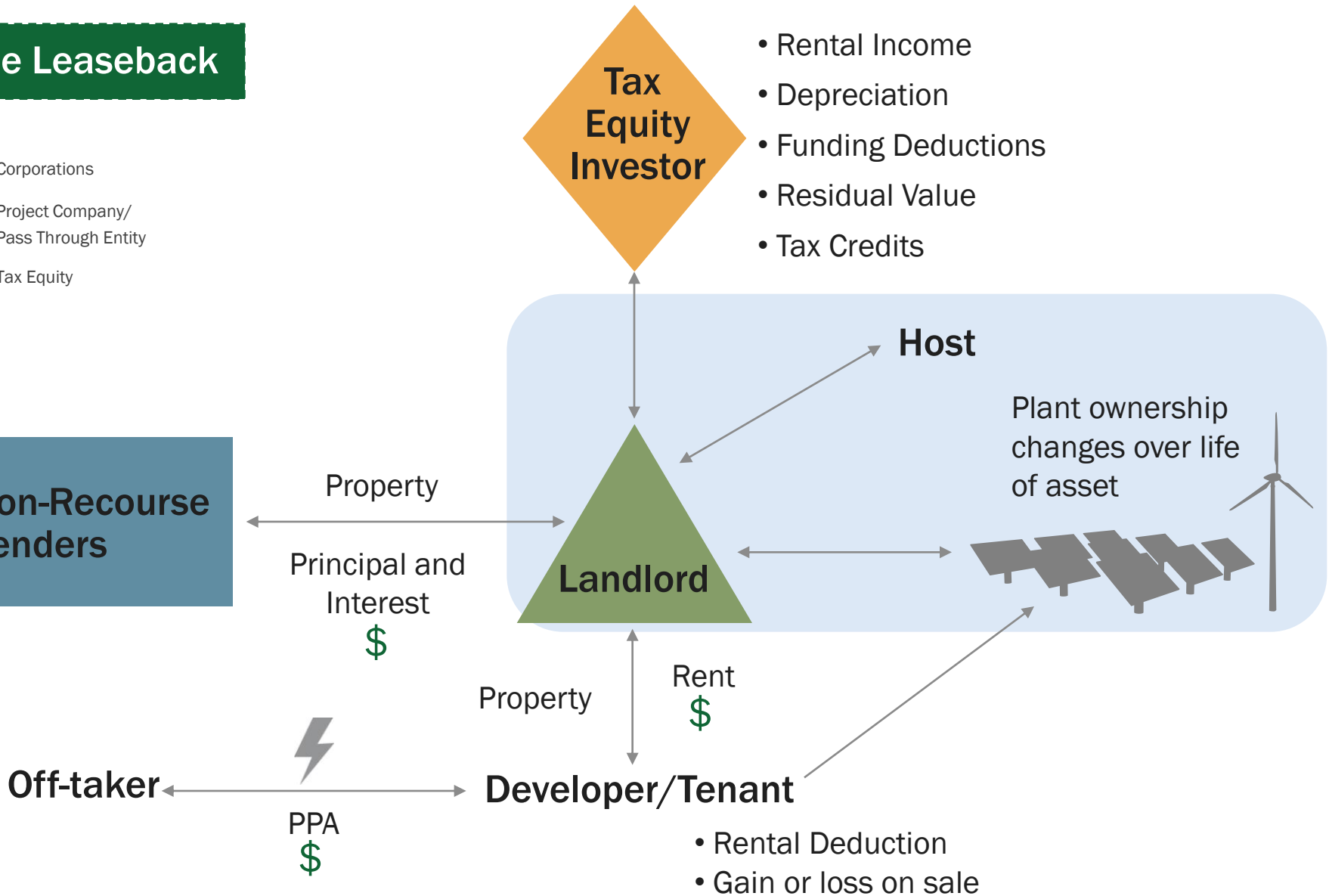


Sale Leaseback

- Corporations
- ▲ Project Company/
Pass Through Entity
- ◆ Tax Equity

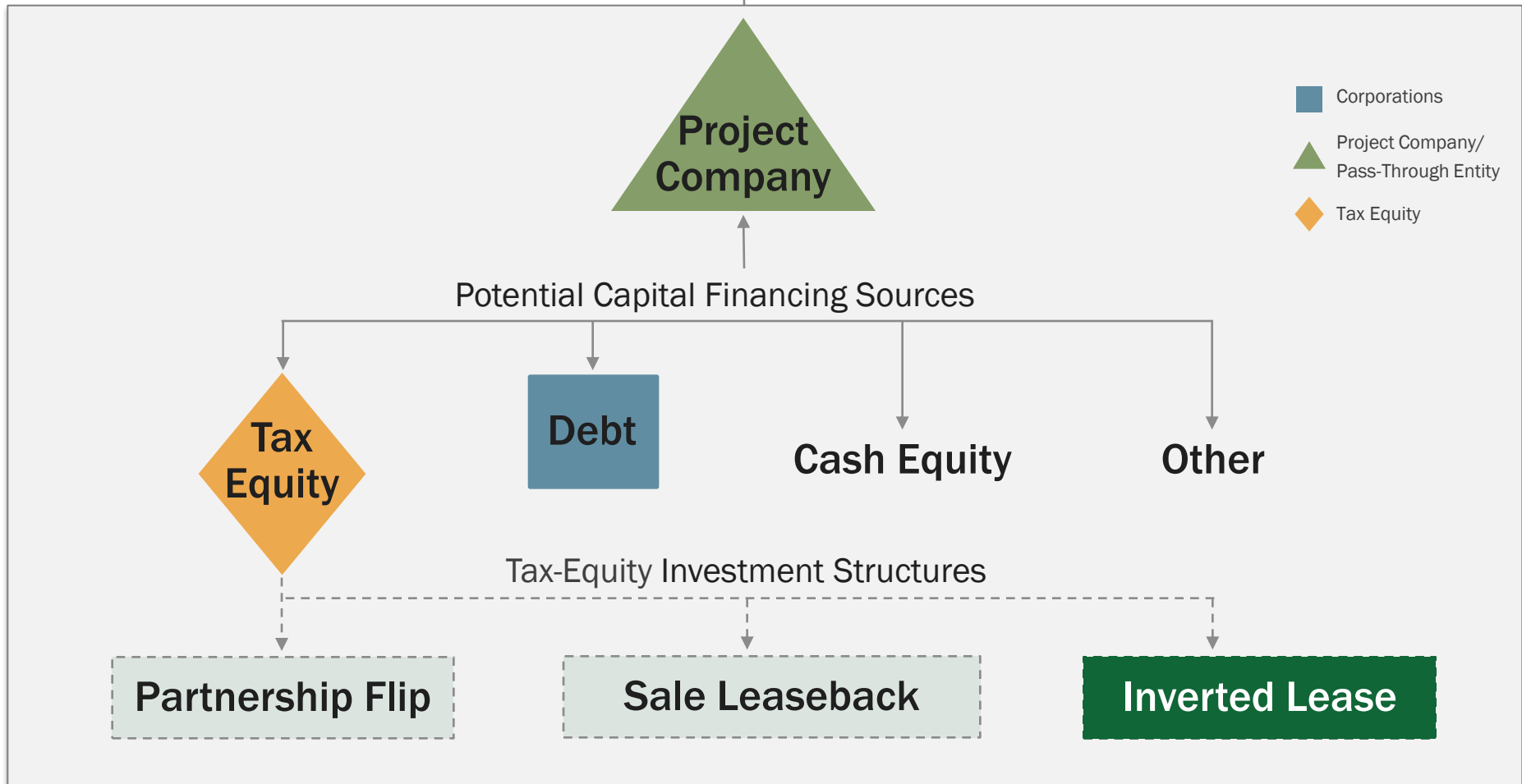
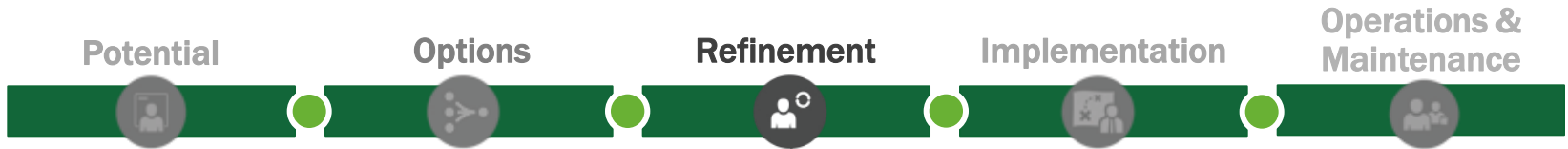
- Rental Income
- Depreciation
- Funding Deductions
- Residual Value
- Tax Credits

Non-Recourse Lenders



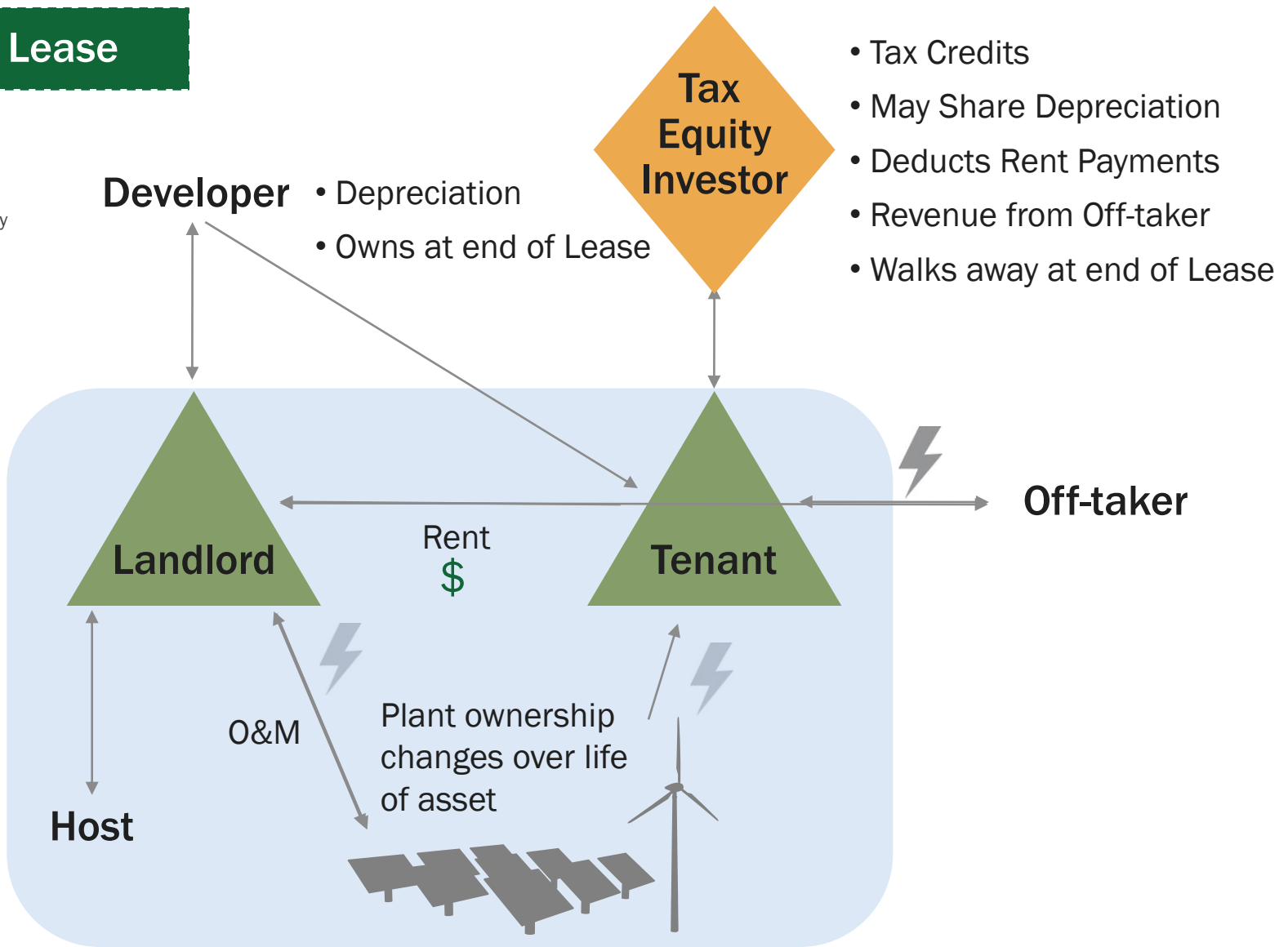
- Rental Deduction
- Gain or loss on sale

Capital Structure with Tax Equity



Inverted Lease

- Corporations
- ▲ Project Company/
Pass Through Entity
- ◆ Tax Equity



- Tax Credits
- May Share Depreciation
- Deducts Rent Payments
- Revenue from Off-taker
- Walks away at end of Lease