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Renewable energy finance and tax trends for 2022

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1. Key Challenges for 2022

- Supply chain bottlenecks continue causing project delays
- Installed costs are growing rapidly due to inflationary pressures and logistical challenges. Recent reductions in import tariffs provide some relief
- Long interconnection queues and uncertain interconnection upgrade costs
  - PJM is going through reform
- High casualty insurance costs for solar
- PPA prices are on the rise due to increasing and less predictable project costs
- Higher inflationary outlook will lead to higher cost of capital:
  - 7+% current CPI vs 2% historical CPI
  - 10-year Treasury rates increased by 35+ bps since Dec 2021
  - Federal Reserve to meet 8 times this year - next in March 2022
- Legislative uncertainty: tax credit amounts, tax rates

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2. Current Tax Credit Deadlines & Phaseouts

- **Solar & Fuel Cells**
  - Projects that begin construction in 2020, 2021 or 2022 will qualify for a **26**% investment tax credit (ITC).
  - Projects that begin construction in 2023 will qualify for a **22**% ITC. For any solar project to qualify for more than a 10% ITC, it must be in service **before 2026**. Fuel cell projects that are not in service **before 2026** qualify for **zero ITC**.
- **Onshore Wind**
  - Projects qualify for a **60**% tax credit amount if the project begins construction in 2020 or 2021. Sixty-percent means 60% of the production tax credit amount or $15 a MWh (i.e., 60% of $25 a MWh) or an 18% ITC (i.e., 60% of 30%).
- **Offshore Wind**
  - Projects qualify for a **30**% ITC, if they start construction before **2026**. Like onshore wind, there is no statutory deadline for the project to be placed in service.

3.1 Pending Build Back Better Act's Tax Credit Provisions

The bill would restore tax credits for renewable energy to full rates:

- **30% ITC** for wind, solar or fuel cells; or
- **$25 MWh production tax credit (PTC)** for ten years for wind, solar or fuel cells.

The bill would extend deadlines to start construction until two years after US power sector greenhouse gas emissions have fallen by at least 75% from the 2021 level.

3.2 Pending Build Back Better Act's Wage & Apprenticeship Requirements

- Failure to comply with the wage and apprentice requirements would lead to an 80% haircut in tax credit amount.
- The wage and apprenticeship requirements do not apply to any project that is **less 1 MW**.
- The wage and apprentice requirements will not apply to any project that is **under construction by no later than 59 days after the IRS issues guidance** to implement the new requirements.
- Davis-Bacon wages that are paid on federal construction projects must be paid to laborers and mechanics during construction and on repairs and alterations for up to five to 12 years after projects are completed.
- Qualified apprentices must be used for 10% to 15% of total labor hours during the same period.

4.1 Pending Build Back Better Act's Direct Pay

- Companies could opt for direct cash payments from the IRS in place of claiming tax credits ("Direct Pay").
- Direct Pay is not a panacea for sponsors:
  - Direct Pay does not monetize depreciation.
  - If electing Direct Pay for an ITC project, it is difficult to step-up the basis from cost to FMV without a third-party investor (e.g., $25.50 v. $30 (Direct Pay: $85 (cost) * 30% v. tax equity: $100 (FMV) * 30%)).

4.2 More Direct Pay Disadvantages

- Timing of payment:
  - Direct Pay the taxable year must close, the tax return has to be filed and the IRS has to process the payment v. tax equity typically 20% at mechanical completion & 80% at substantial completion.
  - Direct Pay election cannot be made until **270 days after enactment**, so the IRS has time to make the rules.
  - Under the 1603 grant program, there were significant haircuts and delays. Will Direct Pay be different? What will the application be?
- **Sequestration: 5.7%** reduction to Direct Payments due to budget sequestration rules.
  - Senate is trying to fix.

4.3 Pending Build Back Better Act's Domestic Content Rules for Direct Pay

- The domestic content requirement is limited to certain projects that (i) make a Direct Pay election or (ii) want a 10% greater ITC or PTC.
- The domestic content requirement is that all steel and iron must be made in the US, and a percentage of manufactured components must be made in the US; the percentage starts at 40% for projects that begin construction before 2025 and increases annually by 5% until reaching 55% for project that begin construction after 2026.
- If a project does not satisfy the domestic content requirement and the project begins construction in 2024, there is a 10% haircut for Direct Pay.
- If a project does not satisfy the domestic content requirement and the project begins construction in 2025, there is a 15% haircut for Direct Pay.
- A project is ineligible for Direct Pay if it begins construction in 2026 or later and does not satisfy the domestic content requirement.
- However, projects that are less than 1 MW are not subject to the domestic content requirement in order to qualify for Direct Pay.

5.1. New Asset Classes: Fuel Cells

- Utility scale (1-15 MW) and distributed scale (<1 MW) fuel cells:
  - 24x7 predictable base-load power; 90+% NCF
  - small footprint (e.g. 15 MW on 1.5 acres vs solar 100+ acres)
  - can produce electricity, hydrogen and heat
  - increasing module life (7-10 years) and decreasing capital costs
  - gas price risk if no tolling agreement; use of renewable natural gas may qualify for state incentives
- Tax equity investors and lenders are actively financing fuel cells:
  - in Q4 2021, tax equity financed a 10 MW fuel cell project portfolio that produces electricity and hydrogen
  - more investors and lenders are getting into the space
  - some lenders require performance insurance and upfront module replacement reserves while other lenders do not

5.2. New Asset Classes: Waste-to-Energy and Others

- Waste-to-Energy:
  - in Q4 2021, tax equity financed the world's largest bio-based gasification system ($100M project costs) for biosolids disposal and production of clean energy
  - qualifies for 30% ITC
  - project-level debt with forbearance agreement
- Carbon Capture:
  - no tax equity financings yet
  - oil companies taking 45Q credit
  - coal companies are exploring 45Q credits to produce "clean coal"
- Biofuels:
  - use of renewable power to produce "net-zero" carbon jet and diesel fuel
  - potential for 45Q and state incentives

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6. Off-Take Trends

- Demand for renewable power is strong while supply of good projects is limited
  - many corporates are buying renewable power directly from projects or through utilities
  - utilities are adding renewables to their rate base and expanding green power programs
- New off-takers: case of cryptocurrency miners
  - US is becoming a leader in crypto mining after China's ban
  - electricity is the largest operating cost item in crypto mining
  - significant load requirements for large-scale operations (20+MW)
  - flexible load profile
  - less stringent location requirements (internet connectivity, power supply security) compared to data centers
  - crypto miners buying power plants
- PPA prices are on the rise and PPA contracts are becoming more developer-friendly

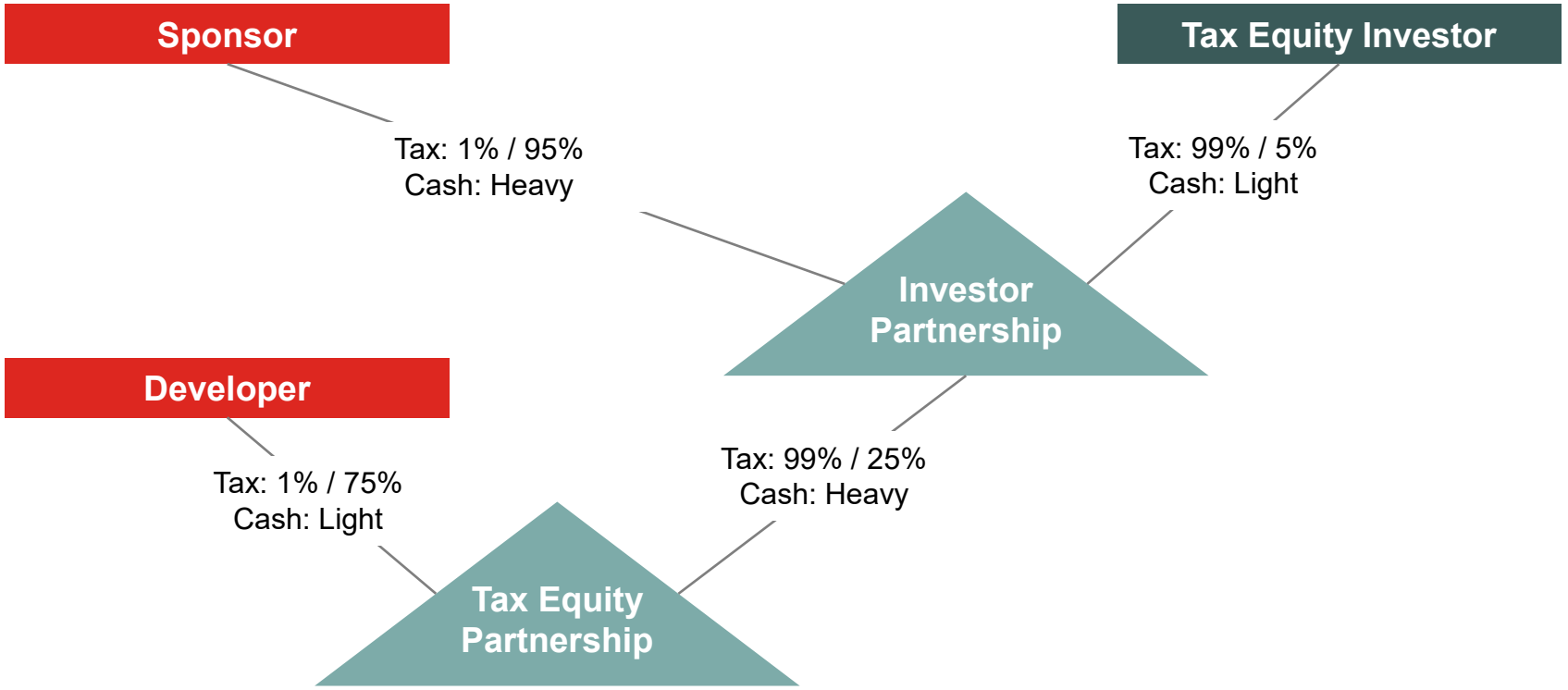
7.1 Tax Equity Structuring Trends

- Time-based flip, yield-based flip and hybrid structures
- Hybrid structures combine (i) a **date** and an after-tax Multiple on Invested Capital (**MOIC)** metrics for determining the flip (ii) **IRR** for determining interim (e.g., years 3, 4, 5) return targets
- Cash sweeps to keep tax equity returns on target:
  - cash sharing ratio adjustments pre-flip (e.g., years 3, 4, 5)
  - cash sweeps post-flip
  - caps on cash sweeps to protect back-leverage lenders
- Deficit Restoration Obligation (DRO):
  - wide range of tax equity investor preferences (0%-80+% DRO)
  - DRO minimization strategies: i) sculpted taxable income sharing ratios 99%-67%-99%; ii) 12-year straight line depreciation iii) project-level debt

7.2 Structuring Trends: Forbearance Agreements

- For ITC deals, senior secured debt with forbearance agreements from the lender for the five year recapture period.
  - During the recapture period, the lender can take cash and foreclose on the sponsor but cannot foreclose on the project.
  - Project level debt creates opportunity to use “minimum gain” to allow capital accounts to be negative without a DRO.

7.3 Structuring Trends: Partnership Flip Sandwich



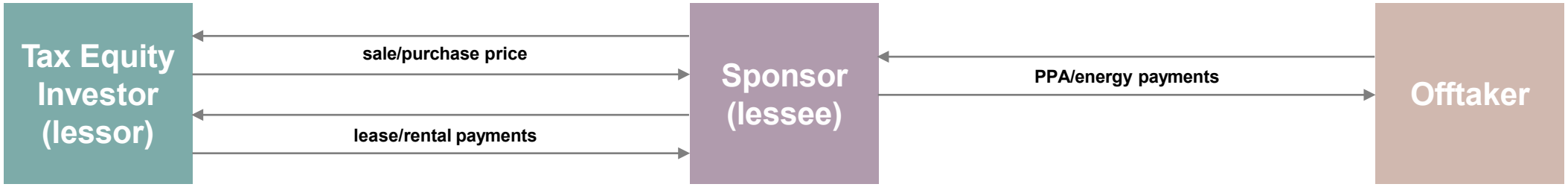
Three Parties:

Developer has short-term cash needs (i.e., maximize upfront cash in exchange for less back-end cash)

Tax Equity Investor primary focus is tax benefits, relies on Sponsor's underwriting expertise

Sponsor has cash to invest for attractive pre-tax return

7.4 Structuring Trends: Sale-Leasebacks gaining market share in solar



- 100% financing (but for prepaid rent or security deposit)
- Can execute 3-months after placed in service
- Documentation is less complicated than a partnership flip
- GAAP accounting is less complicated than a partnership flip
- Standard financial product for banks while partnerships are not
- More expensive “exit” than a partnership flip
- Only works for ITC projects (or geothermal PTC)
- Works best if PPA is 12+ years to provide contracted cash for lessor to underwrite and value

7.5 Structuring Trends: Tax Risk Insurance

Insured Tax Risks

- Basis/FMV ITC Risk
- Begun construction risk
- Structure risk
- Risk of a recapture event occurring
- Bumper-to-bumper (all of the above)

Coverage Exclusions

- Changes in Code or regs
- Material amendments to deal docs w/o insurer's consent
- Breaches in reps given to the insurer
- Filing an inconsistent tax return

Premiums

- Premium levels have declined as more insurers entered the market
- Premium based on perceived tax risk
- "Typical" basis/FMV ITC insurance premium is 2 to 3% of the maximum insurance payout

Process

- Policies have become relatively standardized
- Brokers can manage the process efficiently

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7.6 Structuring Trends: Changes in Hedging Market

- Texas storms in January 2021 were costly to project owners
- Hedges being terminated to avoid repeating the problem
- Tax equity investors no longer want projects to hedge electricity prices by swapping market price for fixed price using assumed production levels (i.e., project has to pay market price, even if the project is not producing (or selling at market))
- Hedges that do not expose projects to risk of being unable to produce/sell are still being entered into

8. Tax Equity Metrics

- Tax equity sizing when based on an ITC multiple: 1.05x – 1.25x for traditional solar
- Flip dates 5.5 years – 7.0 years for solar
- Tax equity returns:
  - 6.0% - 8.0% flip IRRs for utility-scale solar
  - tax equity returns for smaller C&I projects are higher
  - projects with debt at project level (with a forbearance agreement) may in some circumstances demand a premium
  - tax equity buyout price at the higher of i) then FMV or ii) sufficient for tax equity to achieve an agreed after-tax MOIC (e.g., 1.20x)

Final reminders…

CLE code for today's program:

20220120

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