

Financing Carbon Capture Projects: Deal Structures, Tax Credits, Key Issues for Investors and Developers

THURSDAY, SEPTEMBER 1, 2022

1pm Eastern | 12pm Central | 11am Mountain | 10am Pacific

Today's faculty features:

Scott Chabina, Chief Executive Officer & Founder, **Chabina Energy Partners LLC**,
West Conshohocken, PA

Sam Kamyans, Partner, **Allen & Overy LLP**, Washington, D.C.

John J. Marciano, III, Partner, **Allen & Overy LLP**, Washington, D.C.

The audio portion of the conference may be accessed via the telephone or by using your computer's speakers. Please refer to the instructions emailed to registrants for additional information. If you have any questions, please contact **Customer Service at 1-800-926-7926 ext. 1.**

Sound Quality

If you are listening via your computer speakers, please note that the quality of your sound will vary depending on the speed and quality of your internet connection.

If the sound quality is not satisfactory, you may listen via the phone: dial **1-877-447-0294** and enter your **Conference ID and PIN** when prompted. Otherwise, please **send us a chat** or e-mail sound@straffordpub.com immediately so we can address the problem.

If you dialed in and have any difficulties during the call, press *0 for assistance.

Viewing Quality

To maximize your screen, press the 'Full Screen' symbol located on the bottom right of the slides. To exit full screen, press the Esc button.

Continuing Education Credits

FOR LIVE EVENT ONLY

In order for us to process your continuing education credit, you must confirm your participation in this webinar by completing and submitting the Attendance Affirmation/Evaluation after the webinar.

A link to the Attendance Affirmation/Evaluation will be in the thank you email that you will receive immediately following the program.

For additional information about continuing education, call us at 1-800-926-7926 ext. 2.

If you have not printed the conference materials for this program, please complete the following steps:

- Click on the link to the PDF of the slides for today's program, which is located to the right of the slides, just above the Q&A box.
- The PDF will open a separate tab/window. Print the slides by clicking on the printer icon.

Recording our programs is not permitted. However, today's participants can order a recorded version of this event at a special attendee price. Please call Customer Service at 800-926-7926 ext.1 or visit Strafford's website at www.straffordpub.com.

ALLEN & OVERY



Sam Kamyans, John Marciano III, Partners, Allen & Overy
Scott Chabina, CEO, Chabina Energy Partners
Carbon Capture, Use, and Sequestration
September 2022

Agenda

- High level overview of 45Q, state subsidies, and voluntary carbon markets
- Project lifecycle summary
- Detailed case study
- Additional structures

Introduction

- Carbon Capture and Sequestration (“CCS”) projects are eligible for federal income tax credits under section 45Q of the Internal Revenue Code. Currently, the 45Q credit provides:
 - Up to \$85/ton, indexed for inflation, for carbon that a taxpayer captures and permanently sequesters, or contracts with a third party to permanently sequester.
 - Up to \$60/ton, indexed for inflation, for carbon that a taxpayer captures and uses for enhanced oil recovery, or uses as feedstock in a process that enables the carbon to be permanently removed.
 - **Note:** Direct pay is available to all taxpayers for the first 5 years of a 12-year credit cycle.

- In addition to the federal income tax credits, other incentives include:
 - Accelerated depreciation, enabling writing off the capex over a five-year, and in some instances, in the year it is placed in service
 - State level incentives e.g., California Low Carbon Fuel Standards (“LCFS”) program, and similar programs in Canada.
 - Voluntary carbon offset programs e.g., Verra, Gold Standard

- Parties increasingly expect states to impose carbon regulations on emitters to encourage reduction in carbon emissions.

Significance of the Inflation Reduction Act (“IRA”) of 2022

Industry	Capture (\$/tonne) ¹	Transport & Storage (\$/tonne) ²	Total CCS (\$/tonne)
Ethanol	12-30	25	37-55
Ammonia	15-21	25	40-46
Gas Processing	11-16	25	36-41
Cement	40-75	25	65-100
Refineries	43-68	25	68-93
Steel	55-64	25	80-89
Petrochemicals	57-60	25	82-85
Hydrogen	36-57	25	61-82
Gas Plant	54-63	25	79-88
Coal Plant	46-60	25	71-85

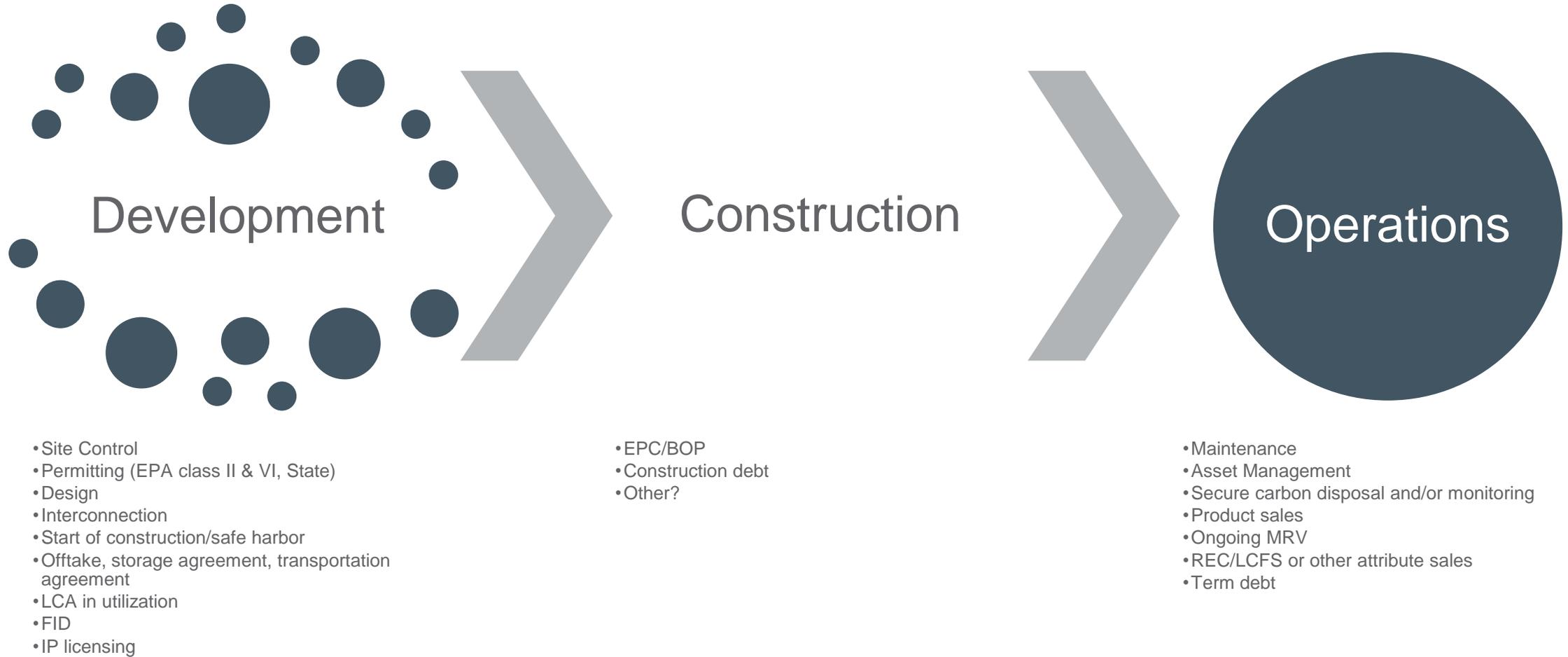
Notes:

1. Transport Infrastructure for Carbon Capture and Storage, Great Plains Institute and Wyoming University, 2020.

2. CATF national estimate used in this analysis. Low could be \$3/tonne to \$40/tonne.

	45Q Annual Carbon Capture Thresholds in the 2018 FUTURE Act in metric tons of CO ₂ /CO per year	New 45Q Annual Carbon Capture Thresholds in IRA in metric tons of CO ₂ /CO per year
Direct air capture facilities	100,000 or more	1,000 or more
Carbon utilization projects	25,000 – 500,000	Carbon utilization projects are subject to the individual project thresholds
Industrial facilities (e.g., ethanol, steel, cement, and chemicals)	100,000 or more	12,500 or more
Electric generating units (e.g., coal, natural gas and biomass-fired powered plants)	500,000 or more	18,750 or more

Project Lifecycle and Associated Contracts



- **Manufacturing**

- Two entry points for manufacture as relates to tax equity (or direct pay) eligibility
 - Qualified Facility
 - For major infrastructure project, on-site and offsite physical work is available, in addition to the 5% test.
 - *Practice pointer:* if this route is taken, only plans are needed for CCS equipment, no actual manufacture or cost accrual
 - CCS Equipment (maybe)
 - Physical work and 5% safe harbors are available
 - *Practice pointer:* CCS equipment is a small overall expenditure relative to facility, resulting in a potential convergence of 5% spend and physical

Development – Major Timing Considerations

- **Permitting**

- Environmental

- EPA Class II Permit

- EOR operations have significant inventory of class II permits

- White Energy – Goldman providing debt and tax equity

- Coffeyville in Kansas – tax equity is TBD

- EPA Class VI Permit

- Only two issued in decades, both owned by Archer Daniels Midland

- See Wolf/ADM partnership that enables using the existing permitted pore

- Schlumberger seeking first Class VI in California (application pending over three years)

- Non-EPA Class VI

- North Dakota has issued two class VI permits in the past year (Red Trail and Minnkota)

- **Pore Space Acquisition**

- North Dakota, Louisiana are major hubs. ND allows for amalgamation if 60% of space obtained through commercial arrangements

- **Rights of Way, if Applicable**

- Summit Carbon, Coffeyville, Wolf, Navigator

- **Tax Equity**

- Investment in CCS equipment only, CCS equipment and facility, or sequestration (with credit pass through)
 - Structures with CCS equipment only result in negative sponsor equity
 - *Practice Pointer* – no cash in CCS equipment only deals, resulting in solely tax credit driven economics.
 - *Practice Pointer* – if SEC finalizes “green” credential reporting requirements, negotiating for carbon offsets can provide economic upside.
- *Competitive/Pricing Advantage* – if tax equity is not subject to 10-year bank regulatory hold, committing to a 12-year strip enables more efficient financing
 - If in a club deal with parties subject to bank regulatory, ability to buy out remaining strips post 10-year period

- **Cash Equity**

- Only available if tax equity will take a position in the emitter or as part of an EOR operation, resulting in exposure to commodity prices (e.g., ethanol, ammonia, crude), some of which have no hedges available. If investment is made in power generation, more price stability.

- **Mixture of cash and tax equity**

Financing – Efficient Capital Raise

- ITC raises around 35% of the capital stack.
- PTC (when at 100%) for wind can raise 50% of capital.
- PTC for CCS is significant, models reflecting over 100% of total project capital stack raised over the 12-year period.
- Consider aligning all the parties in a manner to make for the most efficient capital raise.
- If tax equity and debt financing is expected, lining up the terms to bridge the tax equity coming in should be carefully sequenced.
- CCS has long lead times for capital deployment. 50% PAYGO feature a plus for tax equity.



Risks and Negotiation Pressure Points

Tax Equity Considerations

- Tax equity investors view themselves akin to lenders, recognizing that they must take on some risks in order for IRS to respect the transaction.
- Risks that tax equity **will not bear**:
 - Qualification of project for tax credits
 - Secure storage and leakage
 - LCFS/Regulatory considerations
- Risks that tax equity **will bear**:
 - Structural (e.g., are they a partner; is the entity a partnership with valid allocations for tax purposes)
 - Having sufficient tax capacity

Lender Considerations

- Stronger affirmative covenants for insurance among parties in three verticals.
- Modeling cash flow projections taking into account historic production of emitters.
- Oil/Gas like businesses impact ESG?
- Intercreditor issues can involve numerous parties

Major Considerations

- Transfer Restrictions
- Major Decisions
- Cash sweeps?
 - Given PAYGO at 50% and value of credits relative to contribution, minimal risk of needing sweeps
- Attribute value/ownership
- Lender issues (forbearance)
- Deficit restoration obligation sizing, if any
- Offtaker certainty/credit, if applicable
 - In ethanol deals, producers have no credit
- Indemnities (and related guarantees)
- Tax structuring issues that may affect economics
 - Credit sharing
 - What entity is tax equity invested in?
 - Where does the debt sit?
 - When is the tax-equity investor a partner?
 - Changes in tax law?

Case Study: Tax Equity
Financing with Syndication
Considerations

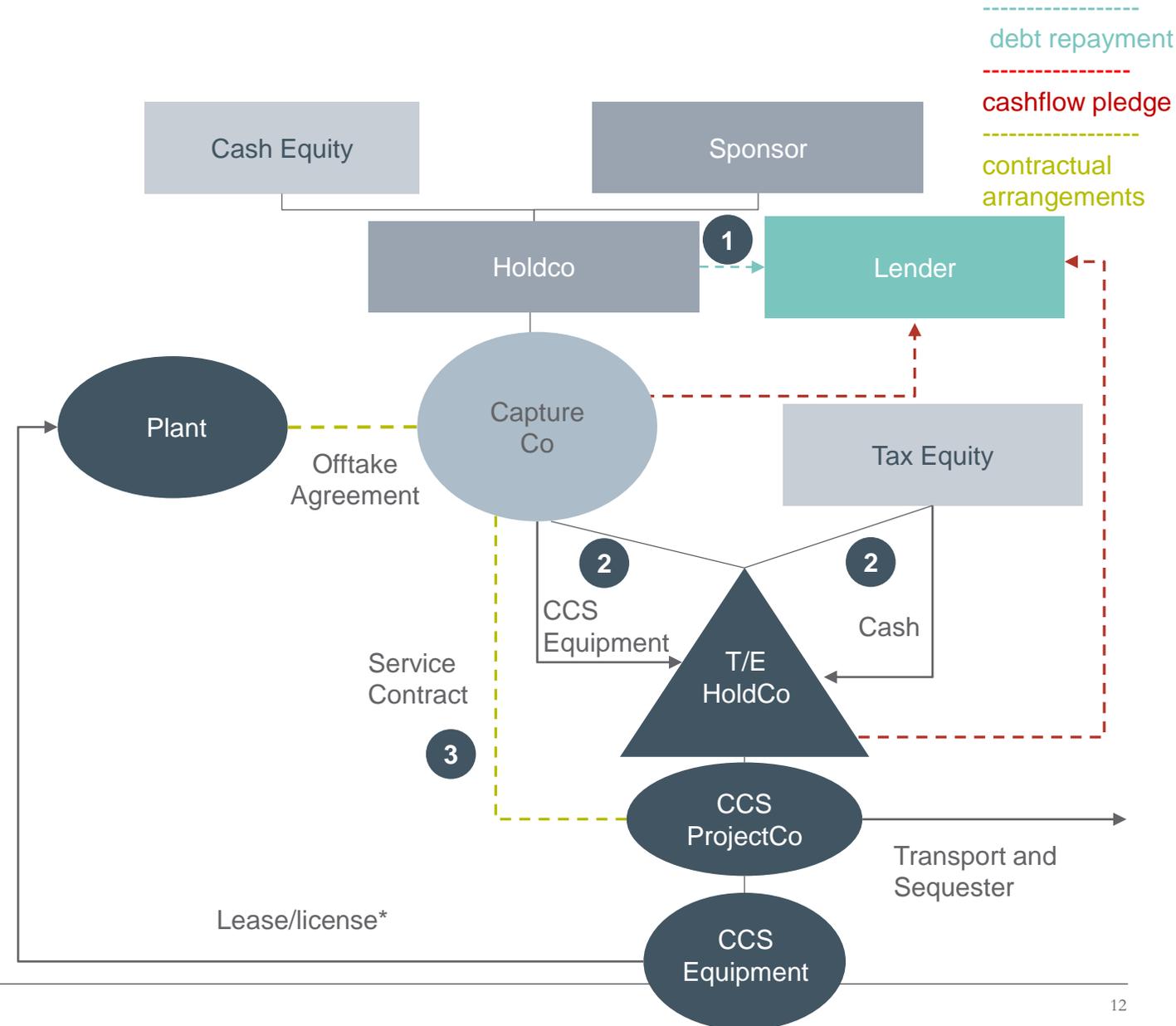
Case Study – Baseline

- The following case study considers a CCS structure whereby tax equity has exposure to one or more sets of CCS equipment.
- Contractually, the sponsor will enter into, among other items:
 - A construction/perm lending arrangement
 - Offtake agreements
 - Transportation agreements
 - Tipping/tolling agreement
 - Storage agreement
 - (maybe) 45Q pass through agreement
 - Uplift sharing, if applicable
 - With Tax Equity: (1) an equity capital contribution agreement (“ECCA”) and (2) a limited liability company agreement.
 - The ECCA governs the conditions pursuant to which tax equity will make its initial capital contribution, deferred capital contribution, and its PAYGO (collectively, the “capital contributions”).
 - The LLCA governs the operations and maintenance, and includes additional detail on capital contribution timing and conditions, along with detailed flip mechanic computations.

Tax Equity Structure

45Q Credit Monetization and Financing Considerations

1. Holdco borrows/draws on facility and repays the loan after it term converts.
2. CaptureCo contributes each set of relevant CCS assets associated with a facility into a standalone special purpose vehicle (CCS ProjectCo) to facilitate the execution of contracts, and contributes CCS ProjectCo to T/E HoldCo.
 - a. Note: Depending on how the construction loan is setup, this also facilitates easier pledges of project-level collateral.
3. CCS ProjectCo enters into :
 - A. Leases/licenses the CCS equipment to Plant*
 - B. Carbon storage/transportation agreement
 - C. Servicing contract with CaptureCo.
4. At COD, construction facility term converts to permanent term loan facility
5. CaptureCo retains/sells environmental attributes, transfers 50% of net Uplift to plant.
 - A. CaptureCo services loan facility and distributes remainder to Holdco.

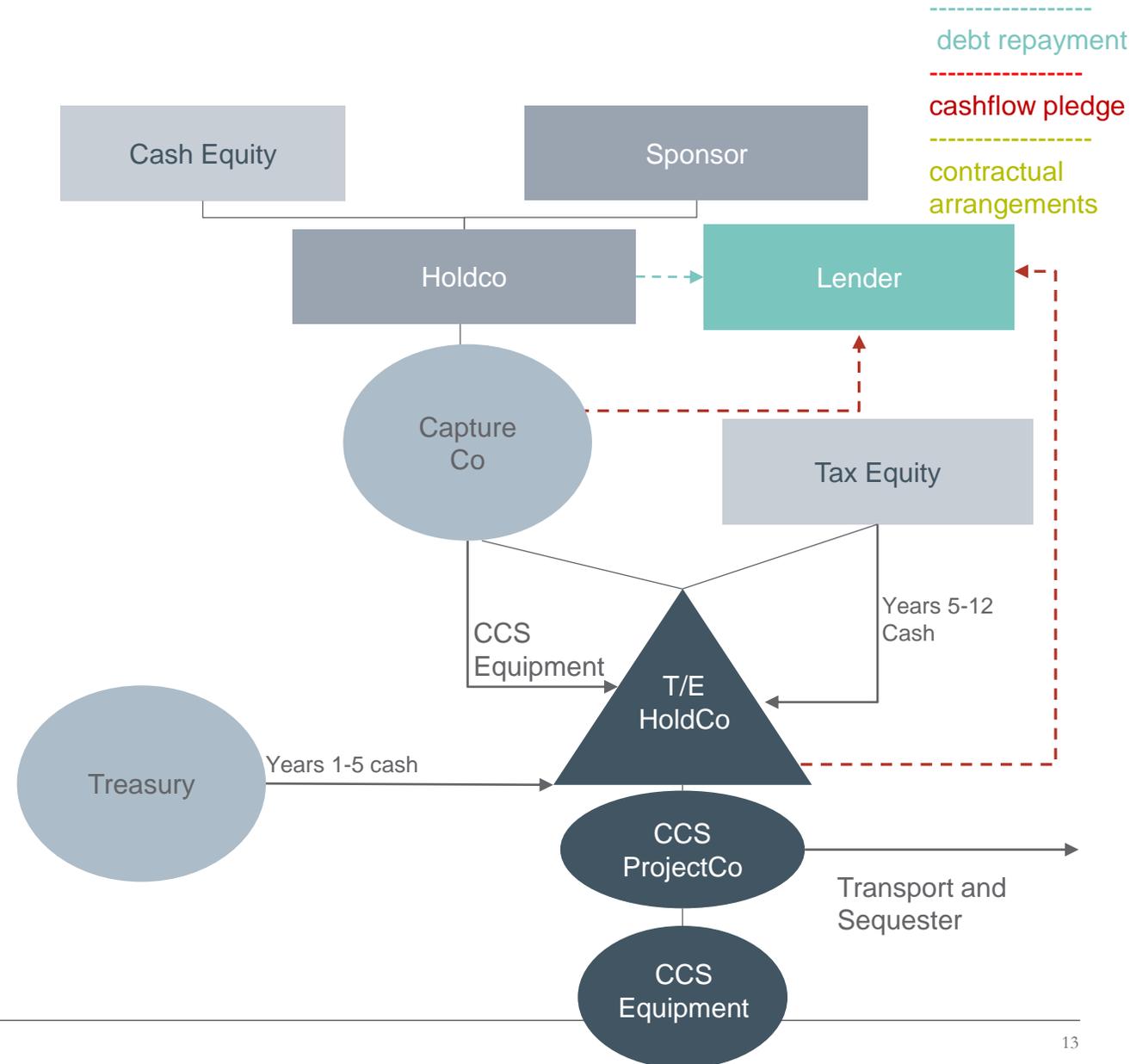


*Lease/license may be required for tax purposes, depending on the tax equity investor.

Direct Pay Structure

45Q Credit Monetization and Financing Considerations

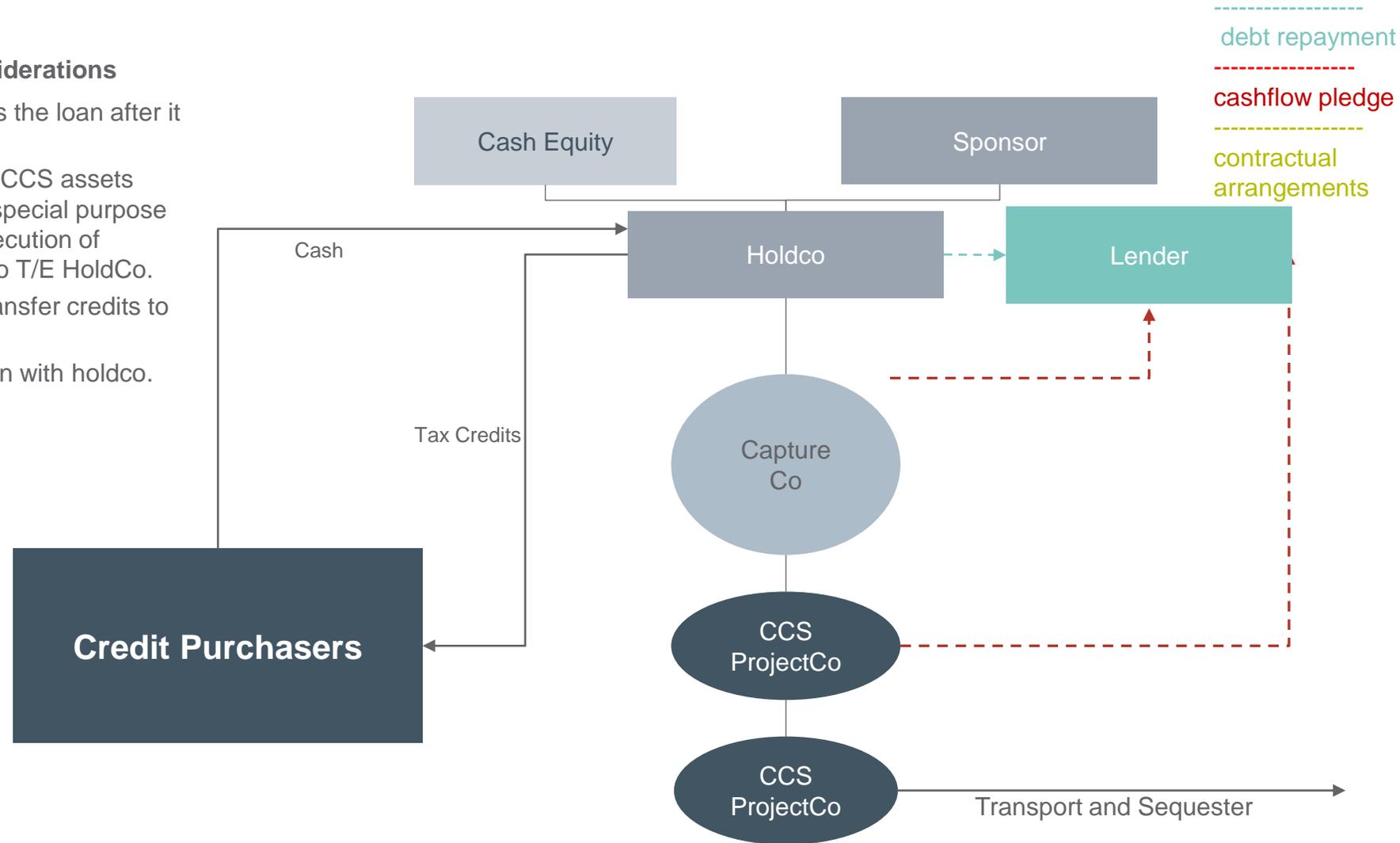
1. Holdco borrows/draws on facility and repays the loan after it term converts.
2. CaptureCo contributes each set of relevant CCS assets associated with a facility into a standalone special purpose vehicle (CCS ProjectCo) to facilitate the execution of contracts, and contributes CCS ProjectCo to T/E HoldCo.
3. T/E HoldCo elects to receive a direct cash payment for years 1-5 of the credit cycle, beginning in the year the equipment is placed in service.
 1. Depreciation remains with sponsor.
4. **Option A:** starting in year 6, bring on one or more tax equity investors.
 1. Depreciation, if any (though note 743 adjustment), from year 6, with tax equity
5. **Option B:** starting in year 6, sell the credits (see next slide).
 1. Any remaining depreciation remains with sponsor



Transferability Structure

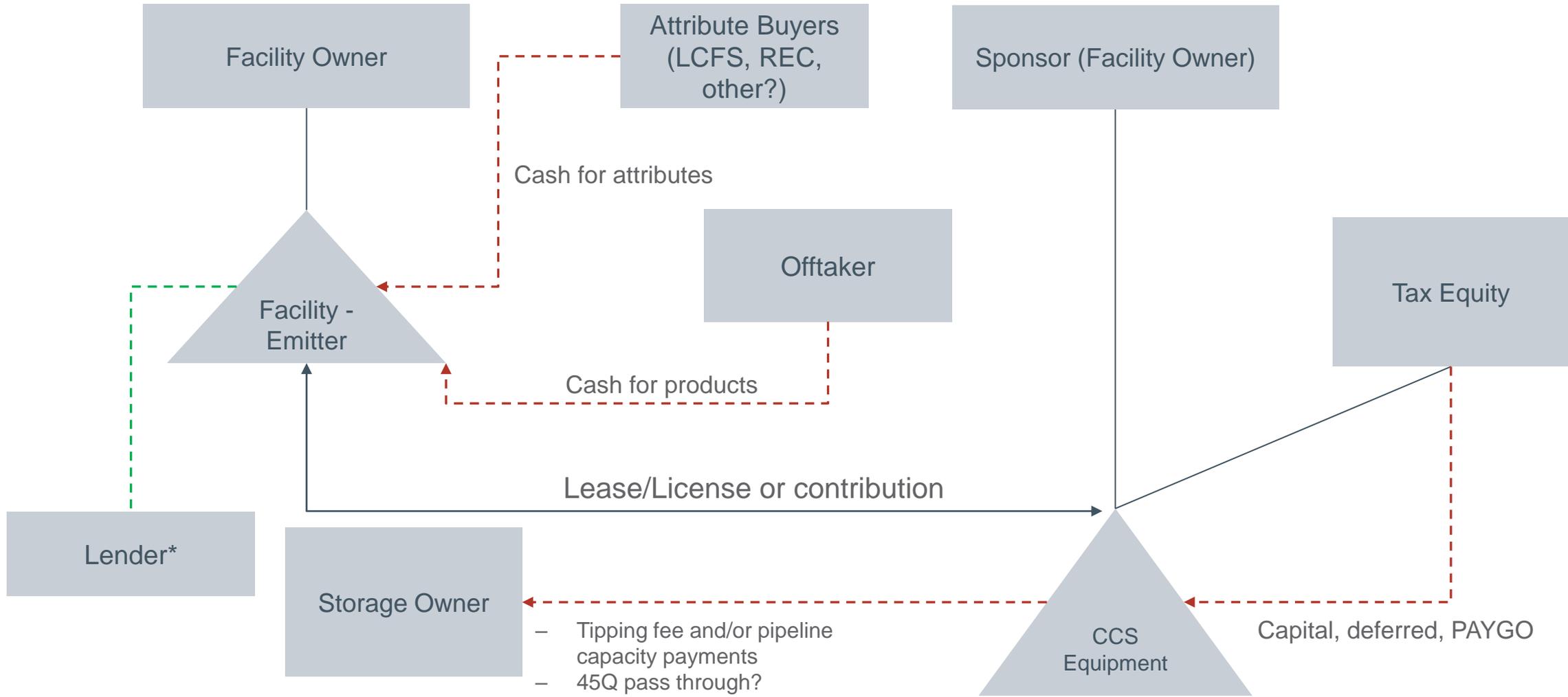
45Q Credit Monetization and Financing Considerations

1. Holdco borrows/draws on facility and repays the loan after it term converts.
2. CaptureCo contributes each set of relevant CCS assets associated with a facility into a standalone special purpose vehicle (CCS ProjectCo) to facilitate the execution of contracts, and contributes CCS ProjectCo to T/E HoldCo.
3. Each year for 12 years, HoldCo elects to transfer credits to one or more credit purchasers for cash.
4. Depreciation, and any unsold credits, remain with holdco.

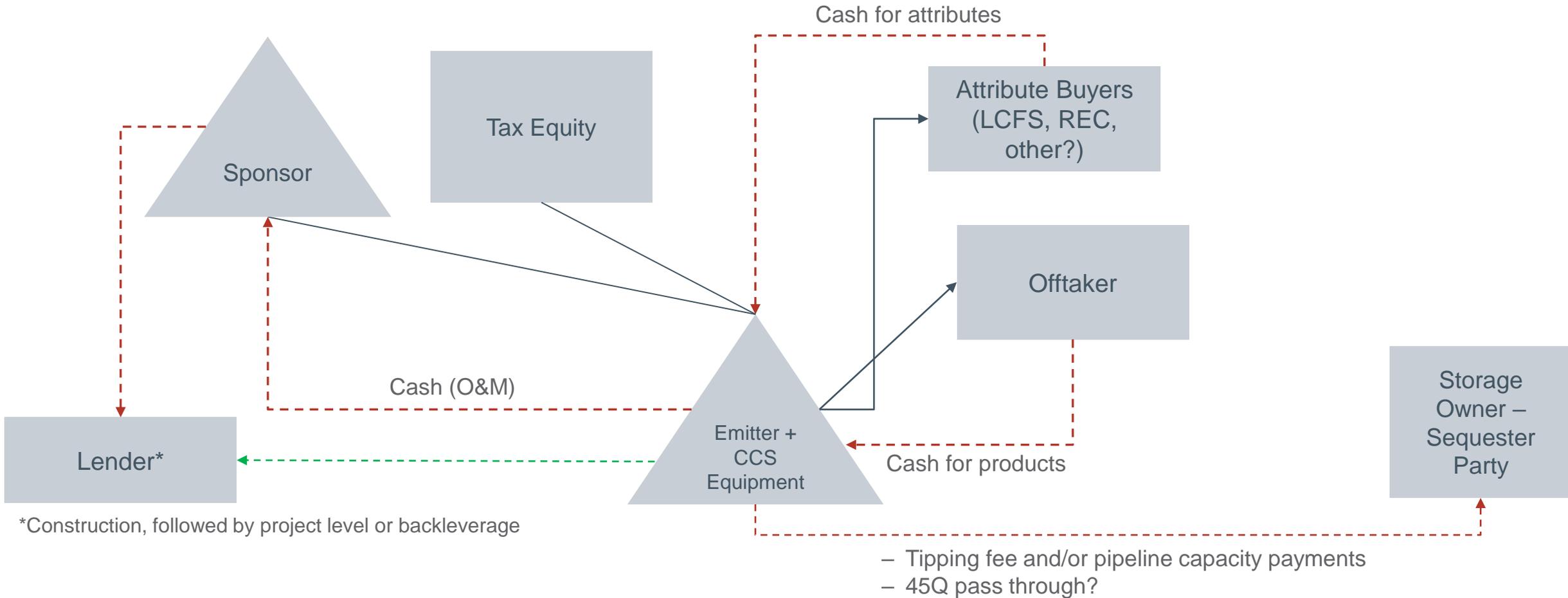


Appendix: CCS Structures

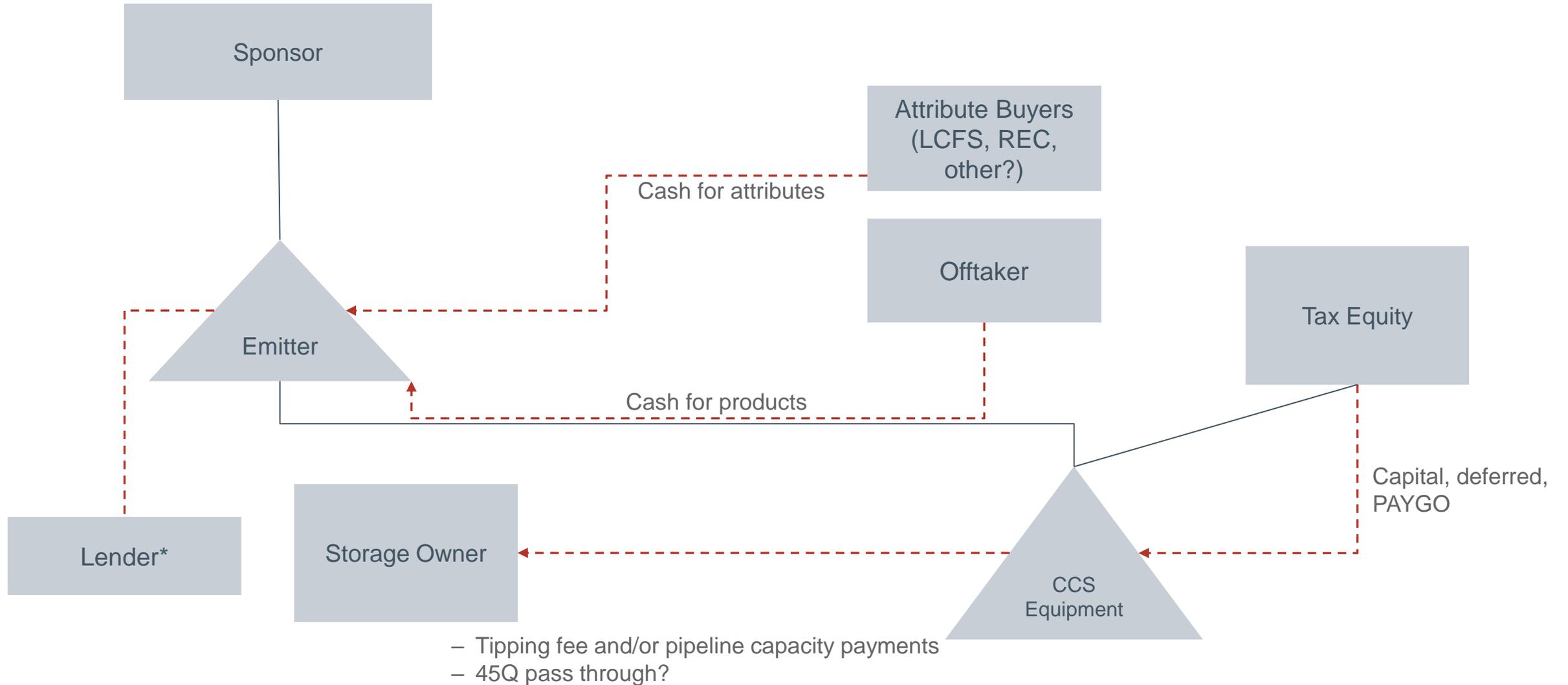
Structure A – Tax Equity and Sponsor Exposed only to CCS



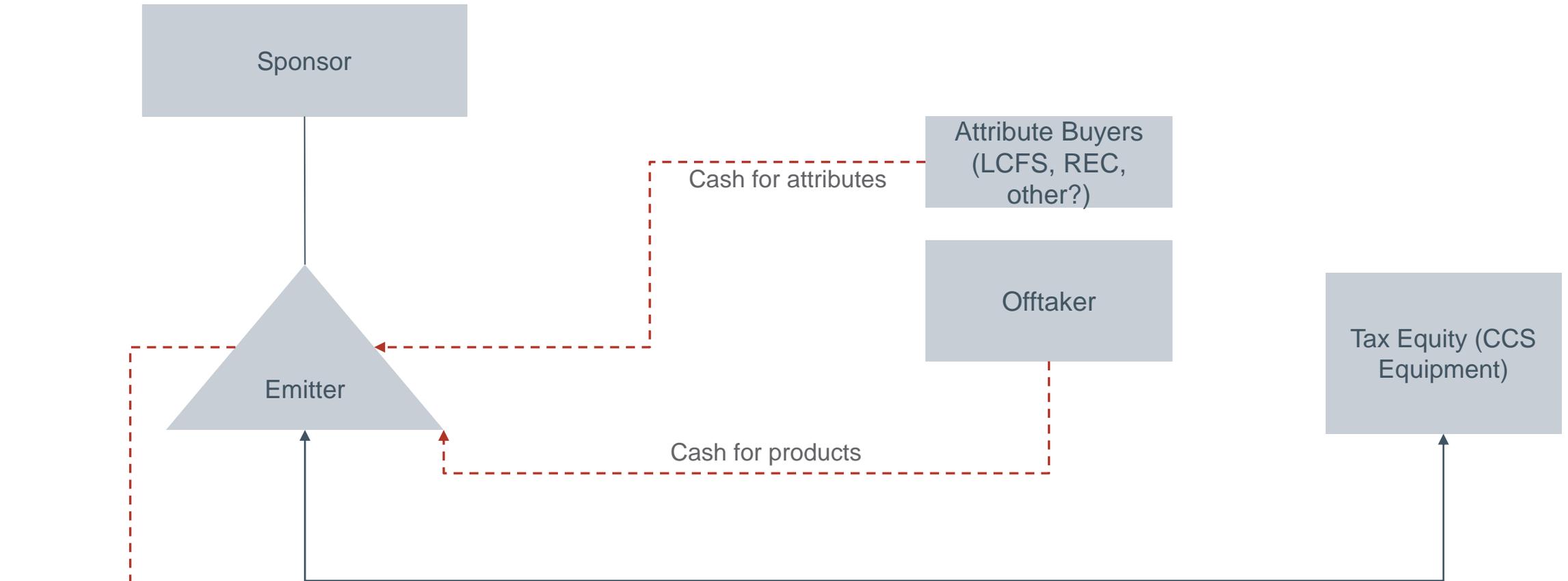
Structure B – Tax Equity in Entire Project



Structure C – Tax Equity and Emitter in CCS

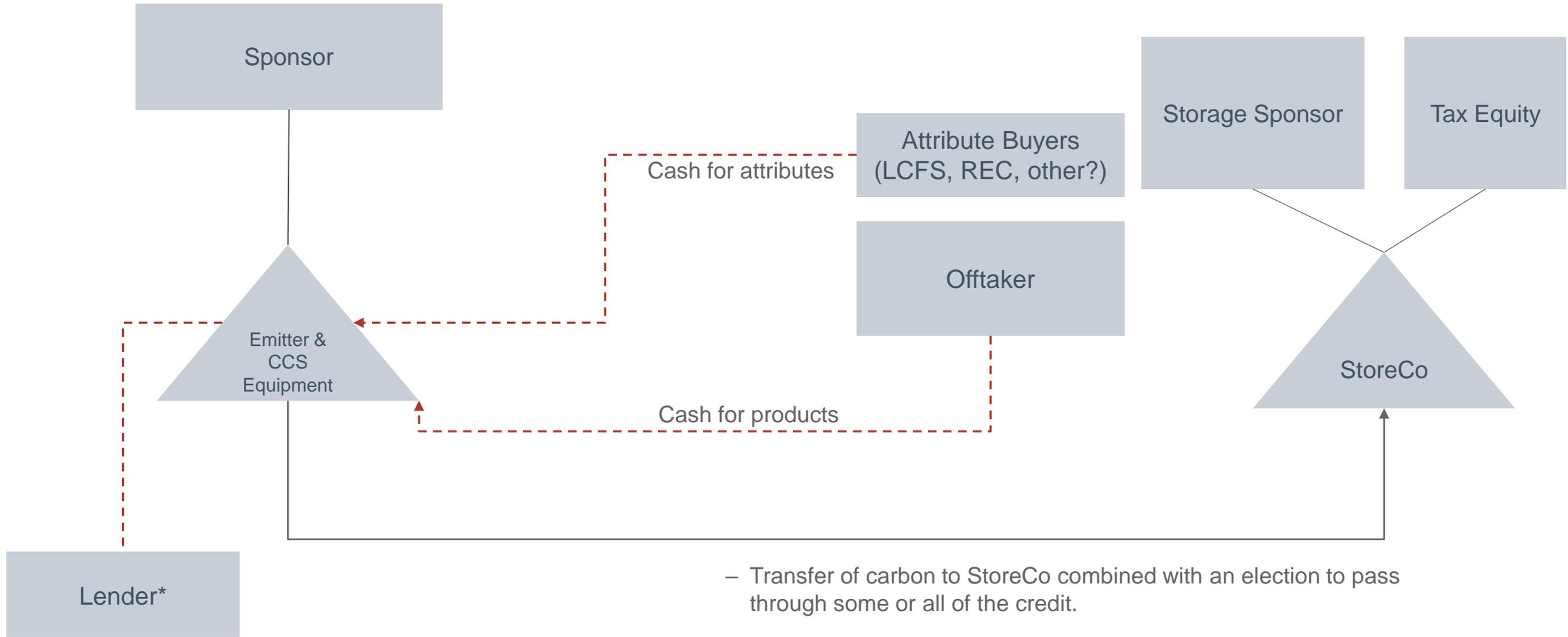


Structure D – Sale Leaseback



- Sale of CCS Equipment to Tax Equity, with a lease of the same from Tax Equity to Emitter
- Tax equity contracts with Emitter to securely store carbon, pays a fee.
- All tax benefits transfer to Tax Equity
- Tax pressure point is ensuring Tax Equity is the owner for tax purposes.

Structure E – Tax Equity in Sequestration Side



Thank You

Scott Chabina

scott@chabinaenergy.com

Sam Kamyans

sam.kamyans@allenovery.com

John J. Marciano, III

john.marciano@allenovery.com