1Q 2024 Market Update

April 2024

Highlights

- **In January, we released our inaugural Market Intelligence Report (MIR), covering more than $3.5 billion in transactions. In it, we estimated the market for 2023 credits was $7-9 billion**. Since then, the market has continued to accelerate and we anticipate tax credit transfer volumes in 2024 may significantly exceed last year.

- **Demand for as-yet unsold 2023 tax credits in the first quarter of this year has been extremely strong.** As a reminder, companies can continue to transact in tax credits through their tax filing deadline. To date, nearly 80% of 2023 tax credits on Crux have received at least one bid – or “expression of interest” – and many have received more than one.

- **Buyers are taking stock of their 2024 tax appetite, and commercial interest in 2024 tax credits is also accelerating.** In the first quarter, buyers on Crux placed over $1.5 billion in bids. Many buyers are responding to competitive pressure by pulling forward tax credit purchases and planning quarterly tax credit purchases to drive up the internal rate of return on credit purchases.

- **Supply of tax credits is growing rapidly and is associated with a wide range of technology types.** On Crux alone, we now have $8.8 billion of credits available for sale. New credit categories took effect in 2024, including for hydrogen production tax credits (45V), carbon capture credits (45Q), and nuclear production tax credits (45U). At the end of March, the DOE and the IRS announced $4 billion in 48C tax credits for over 100 projects across 35 states to accelerate domestic clean energy manufacturing and reduce greenhouse gas emissions at industrial facilities.

- **A mix of policy drivers impacted demand in Q1.** The US Treasury Department has continued to issue guidance regarding clean energy tax credits, which provides greater market confidence in tax credit transactions broadly. Many buyers closely watched the prospect of the Section 174 R&D tax credit extension rise — and subsequently fall — in Congress. Uncertainty around the R&D credit led some buyers to delay planned tax credit deals for a few weeks, but, as likelihood of passage has dimmed, many are now returning to the market.

- **Project finance adaptations are improving access to clean energy tax credits and maximizing their value.** Lenders are evolving rapidly to maximize the value of energy tax credits and pull their value forward to facilitate financing and working capital needs for projects. Investment structures are evolving specifically around transferability. 2024 has seen the emergence of more advanced bridge lending strategies and joint venture (JV) structures designed to enable a step-up in basis to fair market value for ITC projects.

> Pricing for ITCs is trending slightly down from late 2023, averaging 90 cents, but remains strong across technology categories. Average PTC pricing is relatively unchanged from year end 2023 at 94 cents.

Many price dynamics observed in last year's market are still applicable — larger deals tend to price higher, seller credit quality can improve relative credit pricing, and credits from newly eligible technologies tend to price at a discount.

Tax credit market terms

ITC vs PTC

tax credits broadly conform to two types: investment tax credits (ITC), which are generated when a project is placed into service and calculated as a percentage of a projects eligible cost basis, and production tax credits (PTC), which are calculated proportionally to the production of an eligible good (e.g. electricity, a manufactured good, a kilogram of hydrogen, or another product).

Gross vs net credit pricing

Listed prices are gross prices paid by the buyer. Typically, the seller covers insurance & buyer due diligence and legal costs and fees. The gross price net of these costs and fees is paid to the seller.

Spot purchases, strips, and forward commitments

Tax credit deals (and the data associated with these deals) represents a variety of deal types, including 2023 and 2024 tax credit deals, commitments to purchase a multi-year strip of PTCs, and forward commitments or offers for 2025 tax credits.

Supply-side dynamics

Supply of tax credits has grown rapidly in the first quarter of 2024. In 2023, the market consisted of projects and investors which had lined up financing before the release of transferability guidance by the IRS in June 2023, as well as smaller portfolios and projects, and newly eligible technologies. The market adapted quickly to transferability, and demand for tax credits was robust enough to support $7-$9 billion in market activity last year. Data from the IRS indicates that, in the first quarter alone, around 500 companies submitted 45,000 applications to transfer tax credits for tax years 2023-2024.

As 2024 begins, more projects are at earlier stages of development and seeking to monetize their tax credits as early as possible. A multi-year market for tax credits is forming, with sellers soliciting bids for credits for sale in 2025 and later. However, most buyers do not wish to take a position on future tax liabilities more than a year in advance. Financing structures are evolving to support earlier monetization and to be responsive to regulatory requirements that prevent sellers from receiving payment for their tax credits before the tax year in which those credits are generated.

For projects seeking to pull forward investment-related to tax credits, developers typically pursue one of several approaches:

Strategy	Process
Obtain forward commitment for tax credits via tax equity	Projects engage with a tax equity (TE) investor and secure an investment from an active partner. Traditional tax equity is still generally only accessible to projects with credit values above ~$50 million and is constrained to established technologies with contracted revenues. It is common for TE partners to preserve a right to direct the partnership to transfer the tax credits at a later date. Depreciation and cash benefits cannot be transferred.
Forward sell tax credits via transferability	Secure a forward commitment from a buyer for tax credits. IRS regulations generally do not permit a company to receive a cash payment for their tax credits prior to the year in which they are generated. The forward commitment can be used to underwrite a committed bridge loan under terms comparable to tax equity bridge loans.
Seek bridge loan for a portion of tax credit value without a forward commitment	Project developers may not always need to obtain a forward commitment in order to access a bridge loan. So-called "naked" bridge loans can be a lower lift and offer attractive economics to a developer, with advance rates in the range of 65-70 cents per dollar of tax credits. However, availability can vary between lenders and project sponsors, and parent company guarantees are sometimes requested as part of the security package.

> Supply for 2023 tax credits has become extremely tight — particularly for spot PTCs which are deemed to be low risk.

At the same time, 2023 credits under $5 million in notional value, in particular ITCs, are still on the market and trade at lower prices than larger credits do.

The market has significantly more supply of 2024 and 2025 credits. Crux currently has nearly $9 billion in credits listed inclusive of a wide range of tax years and credit types. Pricing is robust for credits for the 2024 vintage year. Later year credits (i.e. 2025, 2026 and beyond) tend to price at a discount or receive less interest, given a narrower buyer base that is interested in longer-dated credits.

Buy-side dynamics

In the first quarter of 2024, the buy-side of the market has seen an influx of new buyers as well as the return of 2023 buyers and historical tax equity investors.

> Advisors and intermediaries remain an important conduit for buyers.

Legal and tax advisors serve a critical role in helping buyers manage risks. One of the most consistent themes we hear is that buyers (especially those new to the market) are likely to rely on their advisors to parse the differences — the advantages and nuances — of different tax credits and technology types. Advisors help to curate information and deal opportunities for buyers.

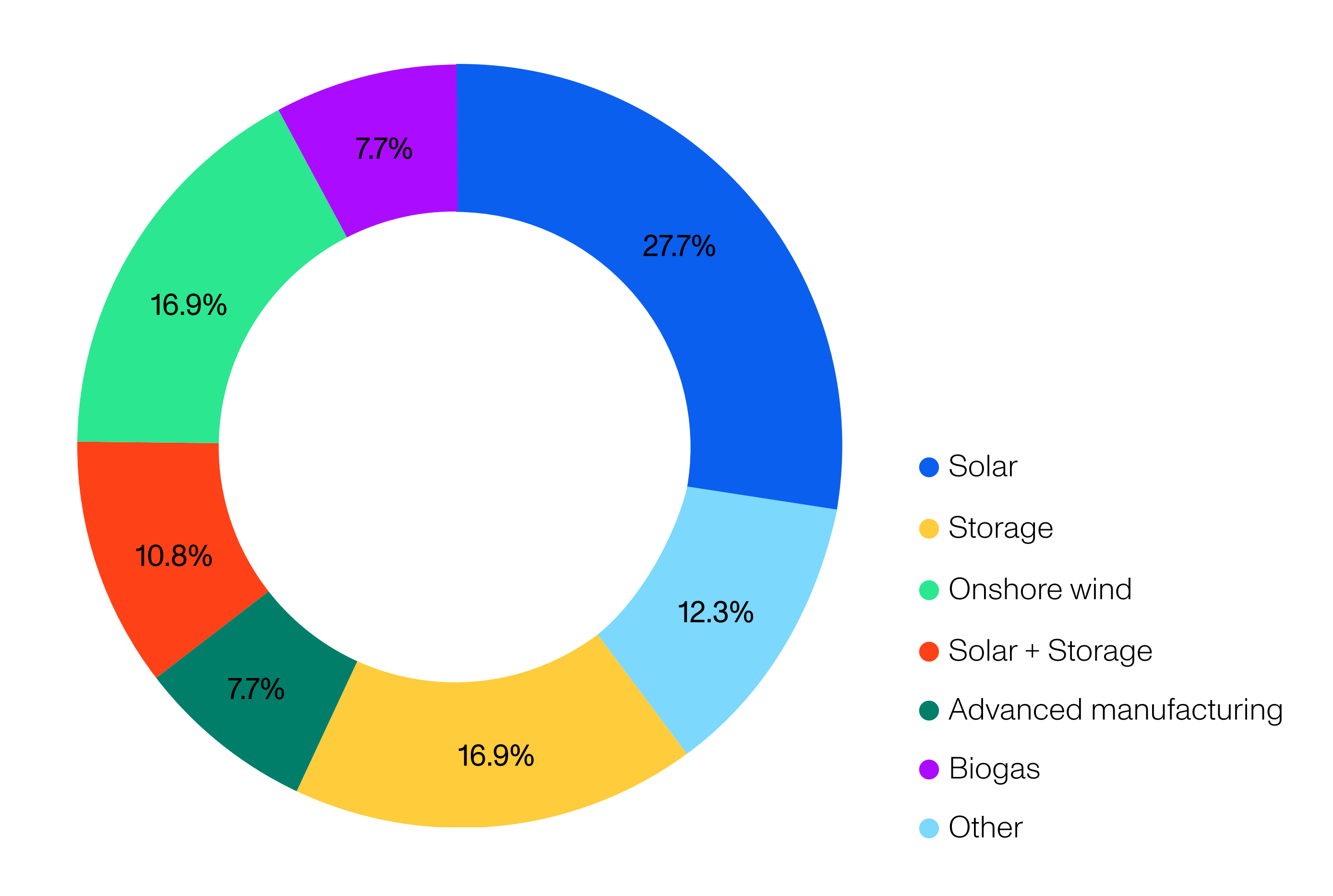
At the same time, buyers express that they value transparency into the market. With new credits, project types, and technologies available, buyers often find that visibility into the largest possible tax credit market is a key first step in developing a realistic tax credit purchasing strategy.

In our January report we observed that the majority — two-thirds — of respondents to our market survey expected tax credit deals to grow in 2024. Within the first three months of 2024, buyers have made nearly $1.5 billion in bids through Crux — nearly a two-fold increase over the bid volume in all of 2023. Already, nearly 70% of 2023 and 2024 credits listed on Crux have received at least one bid, and 40% of these credits have received multiple bids.

Tax credit timing strategy

The 2024 market is already showing signs that it will exceed the 2023 market in total deal volume, and it is likely to be similarly competitive. The IRS permits companies to incorporate tax credit purchases into their quarterly estimated tax filings — doing so can significantly boost the Internal Rate of Return on tax credit deals and create working capital on a quarterly basis. Companies also learned from the tight 2023 market that approaching sellers earlier in the year often affords more options and better pricing on tax credits.

Bids in the first quarter covered a range of clean energy technologies including wind, solar, and battery storage



Demand for credits is growing rapidly, though the market remains in early stages. Demand is the market's "X" factor — supply of credits is growing quickly, but buyers have outsized influence on market formation, liquidity, and price dynamics.

Market pricing

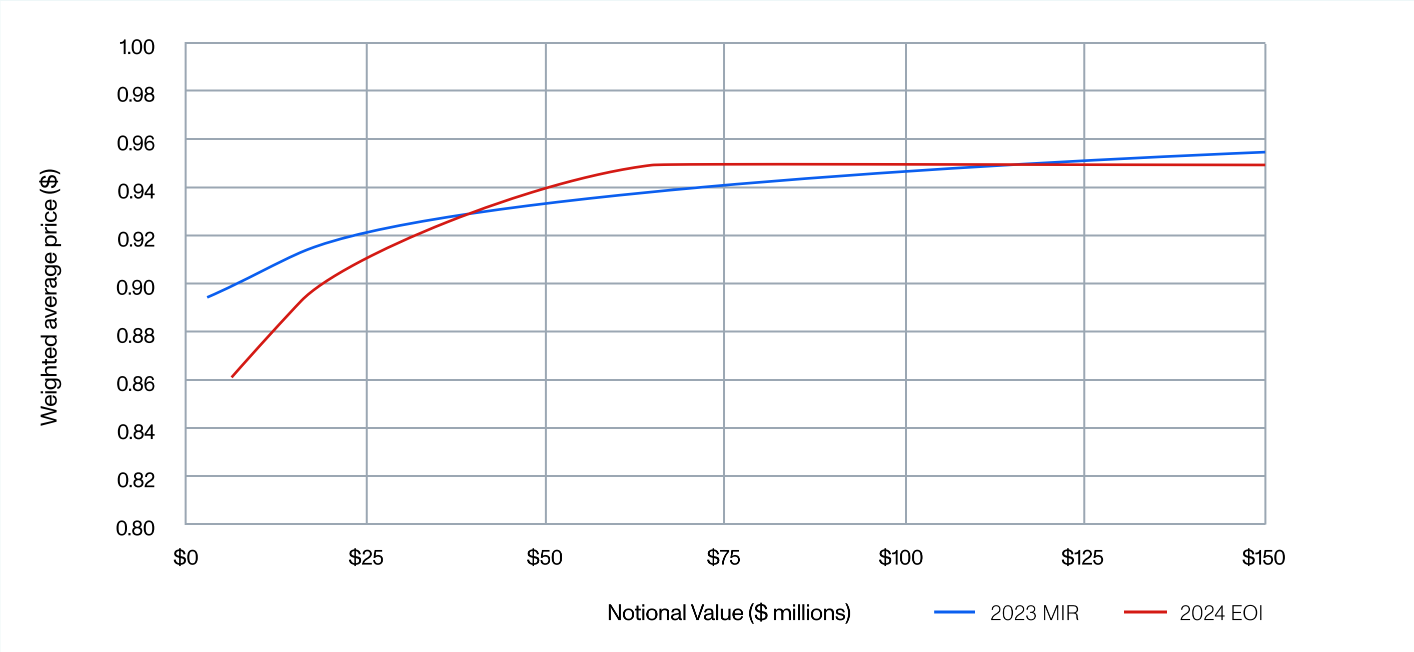
In 1Q2024, we observed a 2 cent reduction in the average price for ITCs to 90 cents from 92 cents in 2023. The average notional value of an ITC deal in our 1Q analysis increased to $24 million from $20 million in 2023. For spot PTCs, pricing has remained steady at 94 cents, though the average deal size tracked fell to $30m from $60m. It is important to note that the data set for the quarterly market update is smaller than the 2023 full year data set and reflects a wider range of technologies.

Pricing on 2023 credits transacting in the first quarter tends to price higher than they did in the fourth quarter, and higher than 2024-vintage year-or-later tax credits.

Digging deeper into our data, several trends are evident:

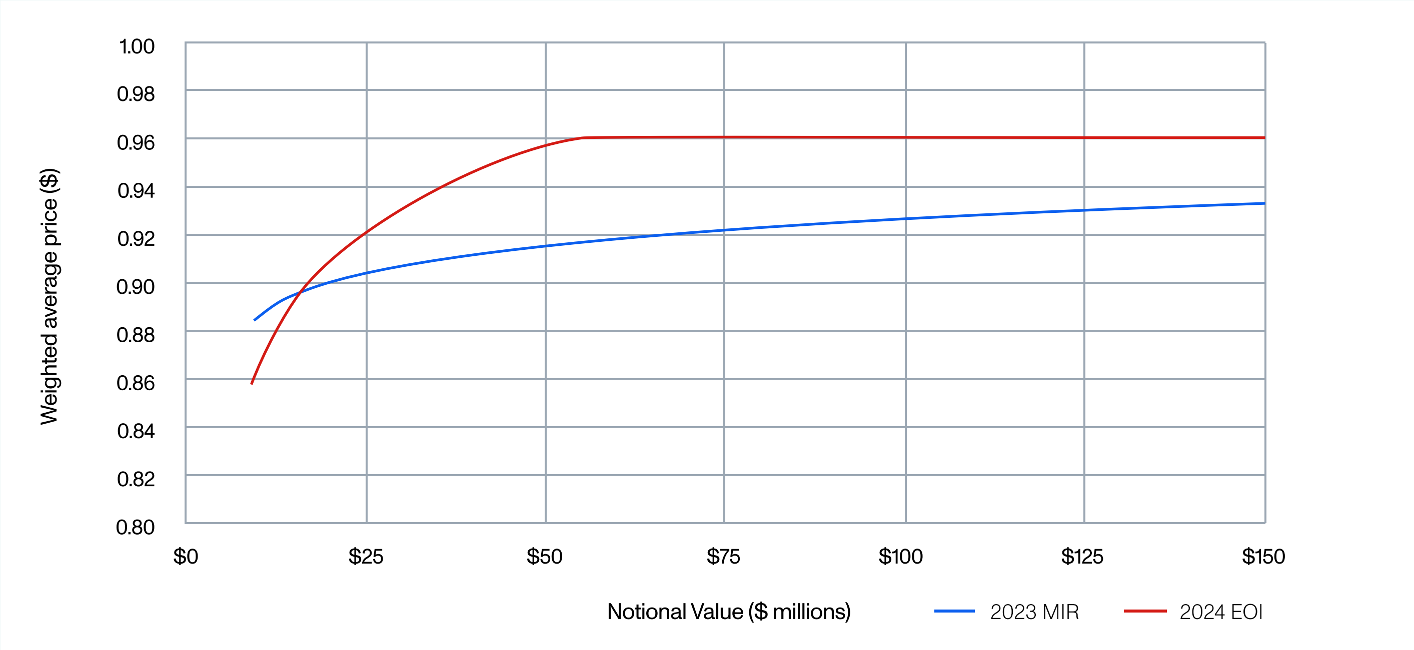
First, credit pricing has compressed for ITCs, particularly at the smaller end of the curve. We are seeing certain ITCs price below the price floor we observed in the 2023 market. Credits at lower notional values tend to price lower than credits in larger deals for a variety of reasons.

Market pricing for ITCs is similar to 2023 except for smaller deal sizes



Conversely, PTC pricing has actually increased at most points on the curve compared to our 2023 market analysis.

PTC pricing has improved for most deal sizes relative to 2023



Second, larger credits continue to price higher than smaller credits for a variety of reasons. Larger deals have some economies of scale — for instance, due diligence costs are spread across a larger deal volume. Large projects also tend to be backed by established developers with stronger balance sheets and longer track records. Buyers also typically expect sponsors of smaller credits to obtain third party insurance covering issues like recapture risk, eligibility, and basis risk. Larger and more established sellers, by contrast, can sometimes offer a parent guarantee instead — driving up both the gross and net (to seller) value of a credit.

Third, certain other factors influence 2024 credit pricing, such as the proliferation of credits from technologies which are newly eligible for transferability — hydrogen PTCs or tax credits for direct air capture of carbon dioxide. At present, some of these credits are transacting at a discount to market pricing.

> Though the market is young, we continue to observe higher discounts assigned to new credit types at first which often improve over time.

Market credit tiering price range and average price in 1Q 2024

New tech and small credits	Smaller or Sub-IG ITC	Premium or IG ITC	Smaller or Sub-IG PTC	Premium or IG-PTC
Novel technology credits <$5 million. may not be insured	Sub investment grade developer or <$25 million ITC	Investment grade ITC developer and/ or >$25 million	Under <$50 million spot PTC, and/or IG owner/ developer	Over $50 million spot PTC, and/ or IG owner/ developer
$0.70 - $0.91 $0.83 average	$0.84 - $0.92 $0.87 average	$0.90 - $0.95 $0.94 average	$0.92 - $0.95 $0.93 average	$0.93 - $0.95 $0.94 average

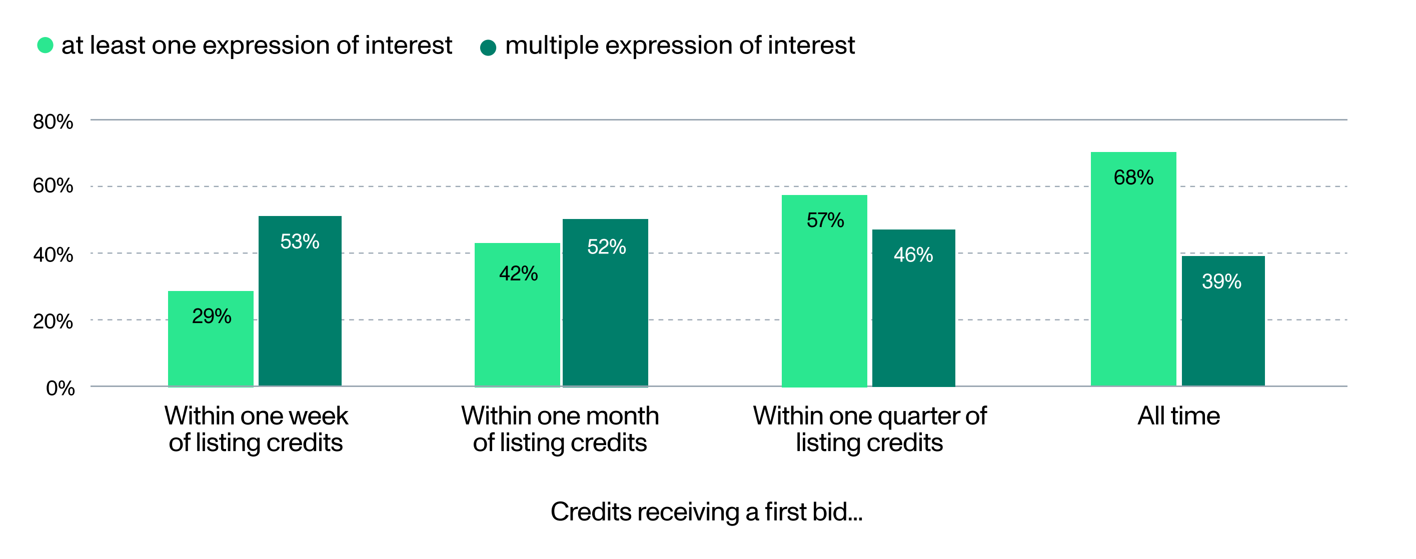
Competition continues to be a significant driver of value for tax credits.

On Crux, we observe that projects which receive an expression of interest early are most likely to receive multiple bids. Receiving a variety of bids allows sellers to obtain the best terms for their credits, and is associated with an improvement in average pricing for credits. In our 2023 market intelligence report, our team observed that competition for credits tends to drive appreciation in prices. Throughout the first quarter of 2024 we continued to find that competition improved credit prices, supported favorable deal outcomes, and contributed to an increasingly efficient market for tax credits.

> In the first quarter, 29% of 2023-2024 credits over $5 million received a bid within a week of listing. Of those, more than half (53%) received multiple bids. After one quarter, 68% of 2023 and 2024 credits have received at least one bid, and 39% have received more than one.

Competition can improve pricing for credits, support better alignment on deal terms, and increase the probability of a successful deal for both buyer and seller.

Over two-thirds of '23-'24 credits on Crux have received at least one bid (credits over $5 million in face value)



At Crux, we have facilitated deals in residential and C&I solar, microgrids, bioenergy, and advanced manufacturing. We've worked with direct buyers and buyer advisors representing a wide range of industries and ranging in size from family offices to the Fortune 500. Our team has significant experience assisting sellers, buyers, and their advisors in identifying counterparties and navigating a successful transaction.

This market is taking shape rapidly and helping to transform the US economy and energy infrastructure. It is difficult to overstate the significance of the transferability market in supporting investment in clean energy infrastructure and manufacturing, both of which have set records. According to the Rhodium Group, US clean energy investment topped $239 billion in 2023, a 38% increase from 2022. According to the St. Louis Federal Reserve, manufacturing investment in 2023 reached $200 billion and is on track to exceed $225 billion.

crux

Crux is a sustainable finance technology company changing the way clean energy and decarbonization projects are financed in the U.S. The company's first offering is the ecosystem for buyers, sellers, and intermediaries to transact and manage transferable tax credits. Crux is co-founded by Alfred Johnson and Allen Kramer, who previously founded and exited a successful marketplace software company, Mobilize. Rob Parker serves as Chief Commercial Officer and brings 20+ years of experience in the power industry, most recently serving as CFO at REV Renewables. Since its launch in 2023, Crux has raised $27 million in funding from venture capital and strategic investors and built a world-class team that merges expertise from energy, finance, government, and technology to power the clean energy transition.

Get in touch with us today to learn more about Crux and the market for clean energy tax credits.