EnergyView Climate and Cleantech

Shifting debt math recalibrates energy transition investment – Cleantech Edge

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Key implications:

- Headwinds for the US banking sector are intersecting with new demand for project financing by energy transition projects. Raising new debt for capital-intensive energy infrastructure remains a challenge despite the significant funding included in the Inflation Reduction Act.
- IRA incentives have triggered movement of private capital into energy transition projects that can employ a higher degree of equity than debt, with credits for PV solar and onshore wind generous enough to help shovel-ready projects reach financial close. Private capital funds invested roughly $25 billion in renewable electricity in the eight months from August 2022 to April 2023.
- Senior bank lending officials continue to tighten lending capacity into the second quarter of 2023 and are increasingly hesitant to lend to private-equity-originated energy projects as PE-company bankruptcies begin to pick up pace. A new US Federal Reserve survey shows tightening credit availability concentrated at the biggest commercial banks, which are the traditional sources of project financing.
- Alternative sources of debt capital, including private debt funds and the US federal government's $300 billion-plus Department of Energy Loan Programs Office (LPO), are still slow-walking commitments to projects almost nine months after the IRA prompted a boom in private capital allocation and a rush to investment in low-cost renewable electricity projects.
- The demand for infrastructure funding that does not represent a technological leap is a challenge for the LPO, which was originally conceived to take on technology risk. A new review of its portfolio performance shows it acts more like a state infrastructure bank than a venture debt fund. With project financiers striking out in traditional bank markets, pressure is increasing on the LPO to lend and guarantee loans even when the technology set is not innovative.

Shifting debt math recalibrates energy transition investment

Energy transition projects that require significant debt financing continue to struggle as many approach financial close and final investment decision.

Non-bank sources of debt financing have yet to step forward with needed capital, and the potential for private debt capital funds to leverage the US Department of Energy's Loan Programs Office funding is still untested.

The incentives in the Inflation Reduction Act (IRA) have lowered the share of debt financing required to get a US energy transition investment closed, but the idiosyncrasies of large cleantech infrastructure projects continue to limit bank capital participation in the US energy transition.

Despite broad and ambitious commitments to net-zero banking mandates and a commercial strategy of engagement with the perceived "next generation" of leading energy companies and projects, the actual scale of project finance completions has continued to lag more than nine months after the IRA was signed into law.

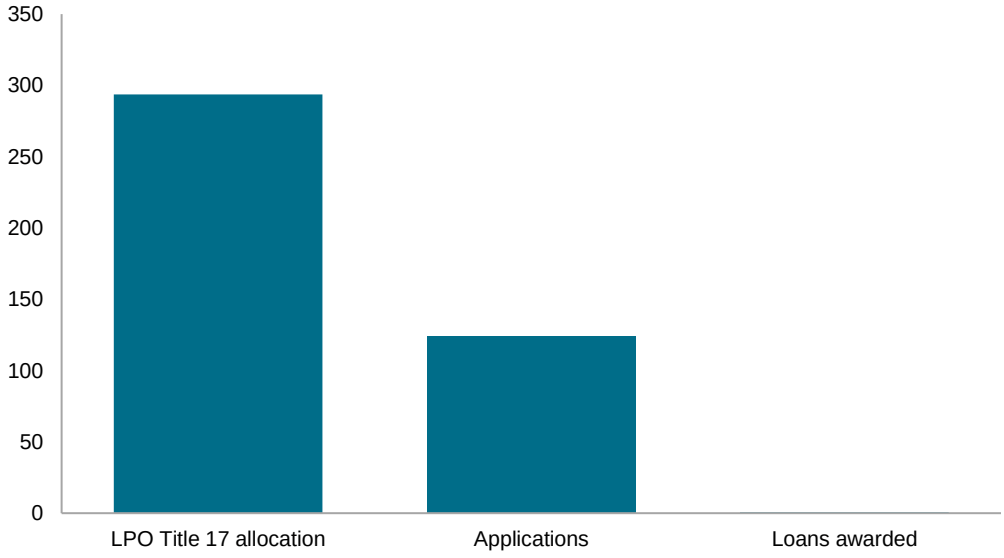
At the same time, any project that can rely on proven technology, clear tax credit provisions and smaller total capital spend per unit of energy has benefitted from a willingness among private capital firms to move ahead using equity-intensive financing structures. While this has mostly favored shovel-ready distributed solar and battery storage installations or the rare utility-scale project with a ready transmission intertie, the speed and decisiveness with which private capital firms with available equity funding have been able to close on investment decisions in the months since the signing of the IRA has left banks that would ordinarily debt-finance those projects out of the dealflow.

Private capital firms deployed roughly $80 billion into IRA-qualifying investments in the period between August 2022 and April 2023. The biggest target for investment was renewable electricity, but factories and products with limited market risk also quickly found backing at scale, with nearly $7 billion of private capital investment being deployed out of funds into advanced manufacturing facilities and $1.65 billion into renewable natural gas assets over the eight-month period. Breaking out pure-play onshore wind is more complicated given project structures and the interplay of project developer and utility balance sheets, but the funded onshore wind pipeline has expanded significantly while many debt-dependent offshore wind projects remain in a pre-final investment decision state.

Even as private capital firms have frontloaded the anticipated rollout of PV solar and onshore wind in the US through acceleration of equity-rich capital structures, banks have cited a litany of troubles and challenges in deploying debt – through underwriting bonds or through loans – into energy transition projects.

Even the Department of Energy's Loan Programs Office has faced headwinds in deploying its allocated $350 billion-plus. Within the US federal government's own debt fund, explicitly charged with derisking financing for IRA-related projects, only a handful of applicants representing a tiny proportion of the available funds have been able to clear the lending hurdles to date. The LPO's recently issued 2022 annual report demonstrates a resurgence in activity for the agency's lending practice after a decade of minimal loan book growth, but also makes clear that a shift in risk appetite or an expansion of mandate will be required to leverage the LPO's balance sheet for private sector debt financing by banks.

Post-IRA LPO clean energy loans & guarantees as of end-February 2023 ($B)



Data compiled May 2023.
LPO is the Department of Energy's Loan Programs Office.
Source: S&P Global Commodity Insights.

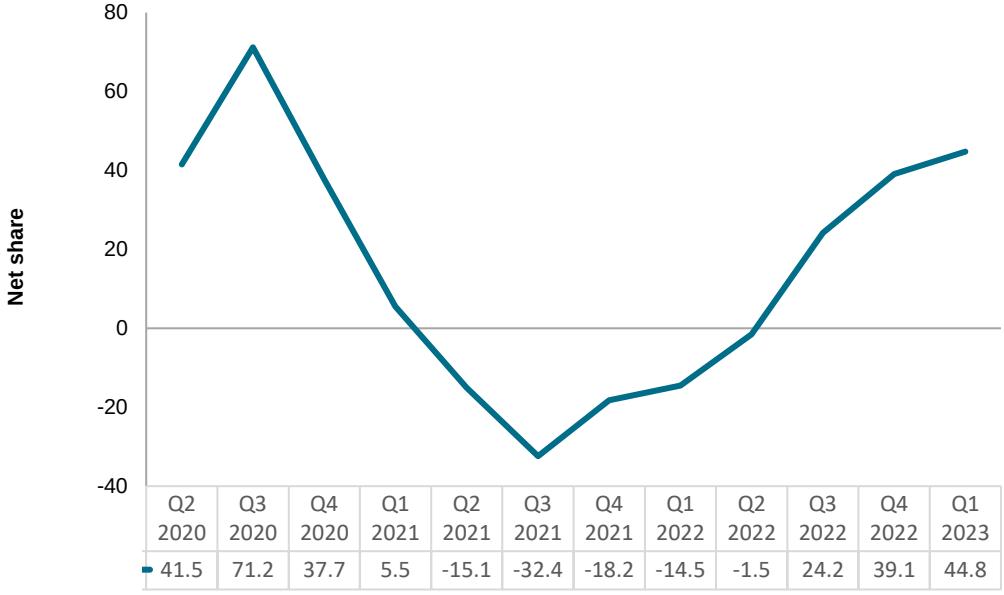
The pain of deleveraging

Banks are having a difficult 2023.

The second and third largest bank failures in US history at Silicon Valley Bank and First Republic Bank have had little impact on overall market functioning, and the relatively orderly rescues of both institutions by, respectively, First Citizens and JP Morgan have only impacted credit availability at the margin. Nonetheless, ongoing volatility in bank stock prices and renewed attention from regulators have diminished already scant risk appetite.

Banks have seen heavy deposit inflows over the last few years of strong economic recovery as the impact of the pandemic lockdowns faded and the reopening of the US economy was kicked into high gear by stimulus funding and super-low interest rates. At the same time, concerned about everything from regulatory oversight to the capacity for deposits to evaporate in a potential recession, banks have chosen to park an increasing amount of those additional deposits in highly rated government and secured debt products or in maintaining cash positions. Some estimates point to as little as 35% of additional deposits from the last two years actually "put to work" in lending or debt.

Net percentage of large-bank officers tightening standards for commercial and industrial lending



	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023
Net share	41.5	71.2	37.7	5.5	-15.1	-32.4	-18.2	-14.5	-1.5	24.2	39.1	44.8

Data compiled May 2023.
Source: S&P Global Commodity Insights.

The closely watched April release of the US Federal Reserve's senior loan officer survey showed sustained tightening across commercial and industrial lending and debt, with the most significant net tightening at the larger US banks. According to the Fed, banks that "reported having tightened standards or terms cited a less favorable or more uncertain economic outlook, reduced tolerance for risk, worsening of industry-specific problems, and deterioration in their current or expected liquidity position as important reasons for doing so."

Against this background, the same private equity firms that usually seek bank credit to lever up portfolio firms have been letting an increased number of their portfolio companies either fall into bankruptcy or take advantage of covenant-lite loans signed in the looser conditions of the early 2020s. Recent S&P Global data shows that while few of the PE-backed firms that have filed bankruptcy in 2023 are energy companies, the pace of bankruptcies among PE-backed companies is at its fastest in years. With private equity firms originating a significant share of the energy transition projects available for potential IRA support, banks are reevaluating the risks of lending to private capital firms that are pressuring them on other fronts.

Pressure on non-traditional lenders

The step-down in risk appetite and debt origination among banks has accelerated in 2023, but rising interest rates and diminished leverage appetite among corporates has been shrinking bank market activity for well over a year.

Both private credit funds and government activity have continued to offer debt capacity for energy transition projects, from bridge and distressed lending out of private credit funds to municipal and state underwriting of renewable energy project bonds.

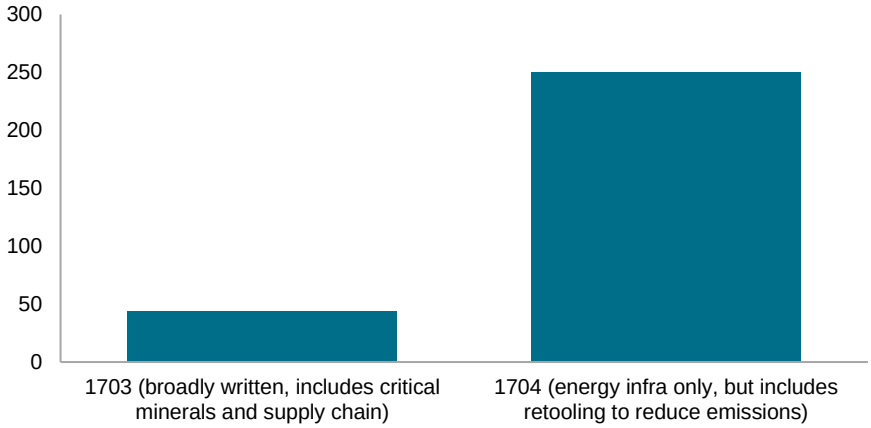
None of the sectoral strain banks are operating under ought to affect the DOE's Loan Programs Office, but in the absence of traditional bank financing for energy transition projects, government capital has not yet filled the gap. Only $606 million has

been lent out of the $250 billion in new lending capacity under the title 1703 program put in place by the IRA and administered alongside other expanded programs by the LPO.

A review of the LPO's annual report shows that its institutional lending and loan guarantee practices have been most successfully deployed in established technologies that have duration and scaling risk. By operating more like a traditional state-backed source of low-cost industrial financing to projects like Southern Company's Plant Vogtle nuclear buildout, the LPO's demonstrated successes and its $124 billion book of applicant projects still awaiting funding decisions are potentially out of sync with its original mission of behaving like a supersized venture debt fund.

The LPO has been actively hiring energy bankers and is expected to accelerate its funding cycle as it works through a backlog of applications. The more that energy transition infrastructure projects fail to find sufficient bank debt backing for project finance in traditional markets, though, the more likely it is that the LPO will be pressured to replace banks in financing of big projects with relatively low technology risk but high levels of stakeholder and regulatory complexity, as well as a long time lag before first cashflow.

Title 17 has two paths to funding loans, both are potentially open to fossil fuel projects ($B)



Data compiled May 2023.
Source: S&P Global Commodity Insights.

The capacity of the LPO to work directly with private credit funds in the same way it works with banks and project financiers to get associated private equity-backed energy transition projects to financial close is still untested and could face political hurdles. Nonetheless, with bank debt markets in the middle of yet another round of tightening ahead of a forecast recession and the political uncertainty inherent in an impending national election, the absence of significant dealflow from the largest pool of cleantech debt capital in the federal government remains a disconnect in the rollout of the IRA-enabled cleantech economy

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