

Merchant Risk and the Energy Transition: Tensions in the Capital

Article

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Debt vs. Equity

As part of the series of articles on the expansion of merchant risk in the traditional project finance market and its interplay with the energy transition, this article will explore the tensions between equity and debt providers. Whilst drivers for debt sizing and contractual terms are many, and vary between technology and project types, there are commonalities in the issues for debt financing projects reliant on merchant risk for their offtake.

Following on from [the previous article](#) that explored the opportunities for owners and developers looking at merchant offtake brought about by the energy transition, this article will look at the implications this has for the debt financing of those assets, and the limits to the trend of increasingly borrower friendly terms for renewables. This article will also explore what solutions are being used to bridge the diverging interests between debt and equity in the capital structure.

All the Money in the World

Whilst quoting a film about the Getty family may seem an odd start to an article about the energy transition, it seems fitting in the context of last decade's constant expansion of the money supply, and with it the seemingly inexhaustible appetite and liquidity for renewable energy and the energy transition.

The combination of loose monetary policy by Central Banks, governments' subsidy for renewables and the growing wider stakeholder interest in financing

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the energy transition, has seen the rapid expansion of sources of capital for financing green assets and a significant reduction in the cost of that capital.

The competition amongst funders to lend to green projects has resulted in steadily improving contractual terms available to borrowers across the sector more broadly (the construct of wind normalization cures in the offshore market for example). With it, the hunt for yield on both sides of the capital structure in a low interest rate environment has resulted in a steadily increased exposure to merchant risk in the profile of the offtake arrangements.

Tension in the Capital

Unlike other limited recourse financing markets such as the reserves based lending and commodity finance markets that have long banked exposure to merchant risk in the offtake arrangements, accepting the ability to sell into the global spot markets, the lack of ability to store or easily transport electricity has meant debt finance for power projects has typically relied on fixed long term offtake contracts.

From debt's perspective, with upside capped at their rate of interest, its focus is to minimize the risk of default through contracted revenue for a fixed price offtake arrangement for the tenor of the loan (as well as the full amortization period where a bullet maturity is used).

This runs in direct contrast to the equity investment case for merchant risk, where in order to maximise profit in a merchant market, equity wants to retain as much of its generation capacity as possible on an uncontracted basis, in order to maximise the upside in the price volatility when the opportunity presents.

However, the ability to raise project finance for merchant assets continues to be difficult. The greater the amount of merchant risk in the offtake, the shorter the tenors and the more conservative the loan life amortization assumptions. Projected revenues from the merchant element of the offtake are typically discounted for the purposes of the debt sizing, with the result being lower leverage ratios and significantly higher actual DSCRs.

Solutions

Creative funders have structured a number of solutions to improve the debt capacity for projects with merchant risk exposure, incrementally improving both sizing, tenors and terms. These solutions can be broadly broken down into three baskets: (i) Revenue Stacking; (ii) Portfolio Approach; and (iii) Upside Sharing.

Revenue Stacking

In the context of the UK market, a number of different revenue streams are available to generators on the grid in addition to selling into the spot market, with generators allowed to apply for multiple offtake regimes. A generator may participate in the dynamic containment regime as well as applying for capacity market contracts and/or blackstart contracts for a proportion of its available capacity and still keep capacity available to be dispatched at the operators discretion in order to take advantage of the merchant market.

By effectively slicing the total available capacity of a dispatch generation asset into tranches, it allows the owners to benefit from guaranteed revenue, from capacity reserved to the Capacity Market contracts for example, whilst still keeping remaining capacity available to be used to profit from the price volatility in the merchant market.

The proportion of the capacity which is reserved to guaranteed revenue streams provides some certainty for revenues over the tenor and amortisation profile of the debt finance which can be used for the base case in the debt sizing.

Portfolio Approach

Portfolio financing for renewables have for some time accepted some proportion of merchant risk in the portfolio however typically relatively small percentages and generally back ended. More recently Sponsors have been applying the portfolio financing structures in order to achieve the same diversity of revenue streams as the revenue stacking model for individual dispatch assets with huge amounts of merchant risk throughout.

It is also interesting to note the increasing collaboration between teams within some of the commercial banks, blending the experience of commodity and reserves based lending (long accustomed to spot market offtake) with the more conservative project finance teams, creating financing structures that allow for greater flexibility around excluded subsidiaries and security perimeters.

Upside Sharing

The material divergence between debt and equity with merchant risk assets is that the debt funders take the risk on the downside of power prices being low, but enjoy none of the upside of high prices and with long exposures over the tenor of the loans, are not able to average out the risk profile to same degree

that the equity can. Creative financiers have been structuring loans to try and better align the risk and reward profiles.

Whilst private credit funds have the flexibility to take warrants or convertible instruments in order to share some of the potential upside of merchant risk (and so effectively share the equity upside), this is not generally an option available to commercial banks or institutional investors providing debt finance.

The more traditional sources of project finance, the commercial banks, have used additional upside cash sweeps and defeasance accounts. Typically the cash sweeps are applied above a negotiated threshold within the base case model, with a portion of surplus cash being applied in prepayment of the outstanding loans.

This is a useful tool where the financings have relatively large bullets at maturity, with the cash sweep helping reduce the exposure in the tail and the associated refinancing risk. This is particularly useful given the nature of the merchant exposure means that price uncertainty and therefore revenue, increases over time.

For institutional investors who typically do not have the same flexibility or appetite for early prepayment on their investments, then defeasance accounts or upsized reserve accounts could provide a similar level of risk reduction. However this is often seen as inefficient cash management from the equity's perspective, who would rather distribute the cash if the debt is not being repaid and the interest continues to accrue.

Hedging

Another traditional option for increasing the leverage in assets with merchant risk exposure is for the sponsors to use some form of hedging for the power price to guarantee some level of fixed revenue through captive offtake to the equity owners or synthetic PPA. In order to retain the upside from the merchant risk, the hedging counterparty or the PPA offtake is necessarily with the equity providers / sponsors.

Whilst this allows the equity to retain the exposure to the merchant risk upside, it is perhaps misleading to list this as a solution to the tension between debt and equity. Whilst it should provide for greater leverage into the asset, the captive hedging arrangement is akin to a guarantee for a portion of the debt service, and therefore not necessarily attractive for equity providers wanting limited recourse financing for balance sheet management.

Future Market

With no obvious abatement of appetite or liquidity for the power sector, and the growing opportunity for merchant risk, it would seem sensible to assume we will see more of it. What better demonstration of a hot market than the entry of junior credit funds into the sector and the inclusion of PIK Notes to the capital structure for this asset class, a debt instrument that was so closely associated with the pre-crash hyper markets of the heady days of sub-prime and monster leverage buy-outs.

It would seem a logical conclusion to assume that we will eventually see other debt providers follow the banks into lending to merchant risk assets and that all debt providers will eventually accept levels of merchant risk in their debt sizing models closer to their peers in the commodity and reserves based funding world.

However, with tightening monetary policy and the spectre of inflation once again stalking developed economies, bringing with it interest rates rise expectation, then it remains to be seen whether the anticipated continued transfer of risk from equity to debt will continue. As higher interest rates improve banks profitability we may not see the same pressure to find yield in the sector.

Perhaps instead we are at the peak of the cycle and business as usual will soon return.

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