

FINANCING POWER AT THE SHALLOW END

NEW UNCONVENTIONAL OFFTAKE STRUCTURES HAVE STIMULATED A WAVE OF INGENUITY FOR PROJECT DEVELOPERS AND THEIR FINANCIERS. BY **DAN SINAIKO** AND **JOHN MARCIANO**, CO-HEADS OF **AKIN GUMP'S** GLOBAL PROJECT FINANCE PRACTICE.

The creditworthy, fixed-price, long-term offtake agreement is the bedrock of project financing. On the basis of these contracts, commercial banks and institutional lenders have become comfortable providing billions upon billions of dollars of construction and term financing for power projects.

Flat load growth, an increasingly competitive power consumption marketplace and, in the case of renewable energy projects, saturated incentive programmes, have created a scarcity of traditional offtake opportunities.

But a short supply of revenue contracts with deep reservoirs of fixed cashflows has not put renewable independent power providers out of business or closed project finance desks. Quite to the contrary, new unconventional offtake structures have stimulated a wave of ingenuity for project developers and their financiers.

This article describes how a new wave of unorthodox offtake arrangements are being underwritten and financed. The discussion will briefly review the historical principals of a bankable power supply arrangement, follow with an overview of what new risks are resulting in projects with shallow revenue pools, and finally analyse the way forward in financing these projects.

The deep end

A project finance structure, at its core, is meant to be a self-sustaining organism. Everything needed to ensure investors in the project see a return of capital and a reasonable return on their investment is in the structure from the moment the first dollar of construction financing is released.

This means long-term site control, a committed turnkey construction plan, an operation and maintenance strategy with long-term cost certainty, secure product market access and, most importantly, a creditworthy commitment to provide all the revenue needed to profitably construct and operate the project.

For power projects the final critical piece of that puzzle is an offtake agreement. Traditional bankable offtake agreements share a number of common threads:

- An offtaker with an investment-grade credit rating;
- Revenue streams with known quantities and timing; and

- Insulation from cashflow interruption due to uncontrollable circumstances.

From these principals the earliest project financings were based on equipment leases and contracts with capacity payments.

As inherently variable intermittent resources began to penetrate the market, energy payment-based project financings took hold. Because intermittency offers limited value to customers in terms of reliability, procurers conditioned payment on delivery of power, rather than the readiness of the plant to provide power.

Projects with energy based offtake agreements were absorbed by the market, but only where expert resource availability forecasts – eg wind resource assessments, insolation studies, etc – allowed for reasonably certain energy forecasts.

The shallow end

Numerous factors have converged to change the face of energy offtake in the developed world:

- Load growth has been flat;
- Renewable incentive programmes are saturating;
- New policy initiatives have empowered retail consumers to procure power wholesale;
- Purchasers require delivery of power at liquid trading hubs, rather than project nodes.

These changes in energy offtake markets have produced agreements with unconventional risk profiles.

- *Non-utility offtakers* – Investor-owned utilities are essentially guaranteed returns by public utilities commissions through rate payer cost recovery. Additionally, many municipal and investor-owned utilities enjoy exclusive franchises in their service territories. Consequently, these enterprises are highly

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stable. This stability is viewed very favourably by credit committees at financial institutions.

Utility customers experiencing muted demand for new generation has resulted in developers seeking out new consumers. These consumers have recently trended towards large corporations that provide energy purchase or hedge commitments and community purchasers.

Corporate customers are typically large, sophisticated energy consumers. They often have a strong balance sheet and liquidity – if not an investment-grade credit rating – but are inherently more volatile enterprises, even where tangible net worth is similar to that of a utility.

Community offtakers are retail subscription organisations designed to provide renewable energy at a discount to retail utility rates. Credit quality is dependent on the quality of the subscriber base.

Moreover, subscribers generally have the right to withdraw from the organisations under certain terms and conditions. Given the potential shifting sands of the subscriber base, the organisation's financial integrity is subject to degradation if the cost of participation becomes disadvantageous.

The uncertainty of selling to corporate and community offtakers, when compared with the stability offered by regulated utilities, causes lenders and investors to take a different view on the integrity of project cashflows.

Where the offtaker is investment grade, or equivalent to investment grade, this distinction may not, standing alone, be significant. However, where credit is less established, as is the case with community offtakers and perhaps social media companies that have short track records, that can contribute to a more sceptical view of cashflows.

- *Basis risk* – Historically, bankable offtake agreements require the customer to purchase power from the generator at the project's point of interconnection, or at a minimum a location where power can be wheeled under firm transmission arrangements without unknown cost. This requirement obviates any risks associated with exposure to real time market pricing.

New consumers may be unable or unwilling to accept power where it is generated because there are risks associated with moving power to load. In competitive energy markets like CAISO, ERCOT and PJM, new energy trades often require generators to deliver power to the customer at a liquid hub, receiving payment at the interconnection node and then re-purchasing energy for customer delivery at the hub.

The risk that that nodal pricing is softer than hub pricing, typically known as "basis risk", presents revenue uncertainty and potentially uncontrolled costs for the project. These uncontrolled exposures are inconsistent with

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the tenets that have been required by project financiers in the past.

- *Short tenor* – Typically, institutional project lenders and investors have based their commitments on contracted cashflows.

To access enough leverage to construct a project, developers needed to identify offtake commitments of 20 years or more. Such long-term offtake arrangements from regulated utilities have become scarce.

It is not unusual for hedge products and regulated Public Utility Regulatory Policies Act (PURPA)¹ contracts to have terms of seven to 12 years. This leaves a much smaller pool of contracted revenues.

To construct projects and return sufficient value to equity, many projects are now dependent on the post-contracted life of the project. Valuing merchant cashflow has traditionally been challenging for institutional lenders and investors.

- *Volume limits* – Projects with energy-based revenue profiles customarily contract the entirety of the plant volume to maximise revenues. Load serving entities have customer bases large enough to absorb all of the generation from large-scale power plants. Newer energy consumers such as unregulated corporations and hedge providers do not have the same volumetric demand.

Offtake arrangements with these entities will have limits on the amount of energy that can be contracted. As a result, larger plants may not be able to contract 100% of the energy they can produce. Incremental volumes are either sold at a contracted discount or into competitive markets on a merchant basis, presenting similar issues for lenders and investors as short tenored offtake arrangements.

Financing in shallow waters

Markets of reduced contract volumes and softened credit profiles present new challenges for financing providers. These players have historically looked for firm, creditworthy cashflows. But smaller fixed-revenue pools and customers with unorthodox credit profiles leave projects with insufficient cashflow that would historically be viewed as bankable to complete a project and return value to investors.

The need to identify and finance uncontracted revenue streams has increased the focus on projections as to what energy will

be worth at a specific point on the grid years into the future.

Some say the forward energy market consultant report has replaced the PPA as the litmus test for a financeable project. Perhaps this is an overstatement, though bankers are clearly looking at highly structured financing solutions with increased creativity and flexibility. The result is an emerging toolkit for financing projects.

- *Flexible pricing* – The uncertainties around merchant revenue streams, either during or after the contracted offtake period, present incremental risks to capital providers. Naturally, increased risks produce higher costs of capital for developers. That said, there is room for creative approaches to financing cost.

Some financiers will ameliorate expensive capital with flexible pricing. As project risks are mitigated through improvements in the structure of the project – such as the rating of a previously unrated offtaker or execution of contracts that provide for more bankable cashflow – spreads will improve for the developer.

Similarly, underwriters may be willing to reduce spreads or soften structural constraints in a financing to the extent they lower their exposure to the project through syndication – syndication suggests pricing integrity and a liquid market for the inherent risks of the project. Viewed another way, flex pricing is a means for lenders to avoid being refinanced out of a position as new market conditions are absorbed.

Alternatively, lenders may provide flexible pricing that allows for upward adjustment where the loan cannot be syndicated effectively and potential participants demand a higher return. In that case, the financing documents may include provisions that allow the cost of capital to increase within pre-agreed parameters.

It bears mentioning that the pricing lever is often the most drastic one. The need to pull it, and the extent to which it must be pulled, is tied to the implementation of the other structural mechanisms used to mitigate lender and investor risk.

While we have discussed flexible capital cost first, it is likely the product of the effectiveness of the structuring mechanisms discussed below. To address this point, some financing arrangements will allow for adjustment of terms and price to strike the correct balance and achieve a successful financing.

- *Project reserves* – Customary project finance reserves include six to twelve months of debt service and operational reserves to insulate lenders from choppy circumstances a project may encounter. Unique project risks can result in increased reserve levels or, in some cases, special reserves. In the context of new offtake strategies, reserves have been used to smooth out merchant exposures such as basis risk and lumpy hedge settlements.

Tying up cash in reserves creates inefficiencies for sponsors. Thus, not unlike pricing, the sizing of these reserves is heavily negotiated. As the cost of reserves creeps higher, developers may be incentivised to identify structural mitigants such as capacity overbuilds or energy storage.

Reserve sizing primarily depends on projected operating exposures and then demonstrated conditions once the project is operating. Periodic updates to critical projections may also be used to resize reserves, though sponsors may be reticent to leave the fate of their project to a consultant's view of the market. Thus the frequency, manner and impact of updated projections is often a topic of robust negotiation.

- *Cash sweeps* – A typical project financing pushes money through a payment waterfall, with equity distributions at the bottom. The suspension of distributions is interrupted only in limited circumstances, such as when a letter of credit or reserve is drawn or where the project's economic performance, usually reflected in the ratio of free cashflow to financing service payments, is significantly below expectations. Minimum coverage ratios are often between 1.2x and 1.3x financial service cost).

Financiers frequently insert additional cash sweep guardrails for projects with soft offtaker credit or heightened market exposures. Incremental sweep triggers correlate to the health of the offtaker or precipitous price swings that impact merchant revenue streams.

For example, in projects with community offtake arrangements, it is commonplace to see cash sweeps tied to offtaker subscription levels. For this reason, it is critical that community offtake agreements have robust subscriber reporting covenants – if the subscriber base or quality deteriorates, cash sweeps are likely to ratchet up.

The sizing of the cash sweeps on incremental trigger transactions need not be binary. A tiered approach where the size of the sweep increases as the contingencies become more acute is appropriate. Moreover, if there are mitigants these can serve to soften the extent of the sweep or remove it altogether as either conditions precedent or conditions subsequent to the trigger.

- *Amortisation profiles* – Sponsors push to size debt with the longest amortisation profile possible so they can limit debt service payments during the life of the project. At the same time, lenders and investors typically want to know that they are going to have their capital returned to them before the expiration of the offtake agreement. It is common to see sculpted amortisation profiles that retire financing when no less than 3% to 5% of the offtake revenue remains.

Where projects have shallow contracted revenue pools, the traditional amortisation

profile will not work – debt service payments will be higher than the amount of available cash. To structure around these issues, the amortisation profile must be rethought. Instead of aiming to eliminate 100% of the financing party's merchant exposures, newer amortisation models may reduce these exposures to high confidence levels before the committed offtake expires.

For example, financing may be sized to coverage ratios of 1.2x to 1.3x during the first half of the committed offtake period, allowing for equity distributions during this time-frame. In the second half of the offtake period, a 100% cash sweep is assumed². If the remaining investment balance is reasonably small and the forward pricing models suggest a high likelihood (P90-P99) that the remaining balance can be retired within a reasonable time frame (5 to 8 years), the investors are likely to be comfortable with the risk.

While deals are being underwritten in this manner, it is a clear that funding sources are assuming more risk. As extreme negative energy pricing in the Texas panhandle demonstrates, there is exposure to projects located in pockets with precipitous overbuilding demand softening.

Moreover, given market and technological dynamism, these circumstances are difficult, if not impossible to predict – forward market analysts will tell you that their views may be overly optimistic or overly pessimistic, but the only certainty is that their projections will be incorrect. In this case, it is entirely possible that the financiers will be left with dim prospects of recovering their investments.

The new deep

New approaches to financing have maintained a robust market for new power plant construction in the face of tepid load growth and incentive saturation. With all the oppressive amount of liquidity in the market place, underwriting of projects with increasing complexity at lower cost is likely to continue.

Are these structures being underwritten thoughtfully or is it a reach for yield? Whether these risks are being properly understood and priced or distorted by the weight of extreme liquidity remains to be seen.

Whenever an industry evolves missteps are inevitable. Money will be made and money will be lost. The dividing line between winners and losers will likely be proper risk appreciation, structuring, pricing and, to some extent, the good fortune to stay clear of the inevitable onset of unforeseen consequence. ■

Footnotes

1 - The Public Utility Regulatory Policies Act requires regulated utilities to buy power from generators on standard form agreements at avoided cost. Each state has its own PURPA contract regulations, but many jurisdictions have mandated arrangements with commitments as short as ten years.

2 - The modelled pivot to 100% cash sweep generally coincides with the occurrence of the maturity date or target return date of the financing in mini-perm/short tenored structures. This is sensible, as repayment or refinancing must occur in this time-frame anyway.



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