

BiofuelsDigest

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The reality of debt structures

“The biggest misunderstanding in the industry is that lenders will not lend unless perfect de-risking is achieved,” says John May, managing director at leading industry investment bank, Stern Brothers. Lenders (bond funds, not commercial banks) will lend non-recourse to below investment grade-rated bio projects where residual risks still exist and must be assumed by them.”

“The only approach to making debt financing available in bio,” May added, “particularly for first commercial scale, is to educate the lenders as to the nature and scope of the residual risks left in the deal. This can be accomplished by using the latest financing structures to de-risk technology (insurance), feedstock (credit wraps,) and off-takes (several structures, but most importantly establishing that some merchant risk can be tolerated by the lender).”

“What these structures accomplish,” May said, “is that they enable the lenders to assess the residual risks and price them. This, in turn, allows them to arrive at a reasonable interest rate based upon the higher credit quality created.

More about de-risking

May explains: “The basic idea behind project finance (non recourse debt) is assigning project risks to the parties in the transaction who are most able to bear those risks financially. In biofuels and biochemicals, these risks are, in order of priority from the perception of the lenders: technology, off-take and feedstock (complete mitigation of construction risk is presumed).

“The “problem with debt financing” in bio, is the inability of developers to fully de-risk these elements to the standard of the classic contracted cash flows project finance model. In our industry, it is simply not realistic to assume anything other than partial de-risking.”

So, the real problem is...

“When we first review most projects and project owners,” May noted, “they have neither fully defined nor taken steps to mitigate these basic project risks in a way that makes the financing marketable at a reasonable interest rate.”

The existing structures and the gaps

Where can risk minimization be most useful? In gaps such as:

1. The long out-years of a project, past the point where there are good off-take or input contracts available, but before the loan is paid back.

2. The gap between the extent of loan guarantee coverage and a loan amount.
3. The execution risk and the unknown-unknowns where first-of-kind projects fall short for unforeseeable reasons. Could be outright failure but, more insidiously, could be project delay or falling short of nameplate capacity.

“We must move away from projects being planned by technology companies which cannot make the economics work for those particular projects,” said May. “It is not that the technology does not work; empirically, it does. What has been stalling projects in terms of financing commercialization is that after all the pre-development planning, they do not generate sufficient revenue.

“This is primarily due to miscalculation of scale,” May added, “building projects too big with capital costs that cannot be amortized quickly enough, and to a misunderstanding of the myriad project site-specific supply chain issues, any one of which can have a dramatic impact on project margins. Most entrepreneurial developers focus on their technology ‘working’ first, and only then go looking for a project location in which they can solve a problem.”

What’s the new paradigm?

“The new bio business and finance model,” says May, “must necessarily involve a true joint venture of strategics (feedstock, off-take, EPC, etc.), each of which will (i) not only integrate forward or backward toward the project developer, in supply chain terms, to de-risking these commercial arrangements which affect the credibility of cash flows — and thus the credit quality of the project financing; and (ii) put their balance sheets to work in providing much needed equity to complement non – recourse debt from the bond market.”

The strategics need to contribute equity to the project, for two reasons:

“First, they have the greatest interest,” said May, “in the long-term benefits of the commercialization of bio technologies over the time horizon and at the return levels. Second, because their contributions greatly increase the credibility of the cash flows arising from the resulting supply chain.”

What about feedstock?

“We have seen the development,” May added, “of such structures as credit wraps from insurers, and counter-party credit enhancement from significant feedstock suppliers with balance sheets, as well as from intermediary aggregators.

What about technology? Off-take?

May noted: “In addition to the traditional use of EPC wraps, which are still rare, and loan guarantees, which are time consuming and expensive, we have seen the emergence of technology performance risk insurance. It is a more ‘surgical’ approach to de-risking technology scale up, and has the possibility of being less expensive and time-consuming than loan guarantees.

“The issue of the lack of off-takes for biofuels and chemicals has been one of the most vexing problems. Even partial off-takes, which deliver some price and margin definition over the medium-term, is a good starting point. This is especially true where the energy or non-energy products being produced by the biorefinery are not volatile from a price standpoint. It is up to the developer and its financiers to convince the debt markets that the probabilistic outcomes from modeling the cash flows do not suggest the need for long-term off-take.”

“Important players in the new financing structures will be firms that are strategically related to the projects,” said May, “and third party ‘specialists’ who have the ability and the balance sheet to de-risk various project elements in a customized way, which has the effect of de-risking cash flows.”

Stern Brothers

Stern Brothers & Co., headquartered in St. Louis, is an investment bank and registered broker-dealer. Stern’s Alternative Energy Finance Group, lead by co-heads Les Krone and John May, focuses on the structuring and placement of debt, as well as corporate and project equity, for companies and projects across all sectors of the renewables industry. Stern pioneered the use of non-recourse tax-exempt bonds as an alternative to bank debt in the biofuels and landfill gas areas, and has expanded its practice to include tax-exempt and taxable bonds for second generation biofuels, biomass, hydro, solar and waste-to-energy projects. In a non-financing role, Stern acts as a financial advisor to companies seeking joint venture partners and merger advice.

Krieg DeVault

Krieg DeVault’s Alternative Energy and Clean Tech Group is a multidisciplinary group of attorneys covering all aspects of the energy business, including debt financing, equity capital, real estate, environmental, project contracts (feedstock and off-take), intellectual property, federal and state regulatory matters and related services in all aspect of an energy business’s lifecycle. The group is led by John Kirkwood and consists of approximately 15 attorneys who have teamed on projects starting with the first generation ethanol revolution to present day projects in wind, solar, waste to energy, biofuels and biochemicals. The team has represented developers, commercial banks, investment banks and institutional investors and has worked with the USDA and the DOE to adapt their programs to modern day project finance standards. In recent years, they’ve become a national leader in project finance for the biofuels and biochemical industries, using our innovative skills to bring products such as supply chain and technology risk insurance products to project finance — and are advisors to many of the Biofuels Digest Top 100 companies.