NEW ENERGY RISK

How New Energy Risk partnered with Fulcrum BioEnergy to secure over $175M in bond financing for Sierra BioFuels Project

$175M

In Bond Financing

2.0%

Annual Interest Rate Savings on 20-Year Bonds

$35M

Project Savings

"Working with New Energy Risk helped us, without a doubt. They helped us close quicker, radically increased the probability that we would close at all, and lowered the overall interest rate of the money we raised."

Jim McDermott,
Founder & Executive Chairman, Fulcrum BioEnergy, Inc.

Challenges

Closing a bond on the Sierra BioFuels Project

Fulcrum BioEnergy is on the cutting edge of the clean and sustainable energy industry.

Their Sierra BioFuels Plant will open in 2020 and it will help turn America's household garbage into low-carbon syncrude product, which can then be used to create products like jet fuel & diesel.

HIGHLIGHTS

CHALLENGES

- Difficulty in securing project financing
- High expected interest rate from Morgan Stanley & JP Morgan
- Banks hesitant to lend due to the perceived risks of a new project

SOLUTION

1. **Assess.** Quantify technology risk in the operation of a plant or new tech
2. **Cover.** Meet warranty obligations and guarantee a level of production sufficient to meet debt service
3. **Analyze.** Leverage risk analytics and relationships in the insurance industry
4. **Insure.** Create a custom insurance solution to promote tech adoption

RESULTS

- Closed a 20-year senior bond issuance for $175m
- Improved terms of bond offering to the tune of $35m in project savings
- Increased certainty of execution in the bond market
- Saved time going to market

Jim McDermott, Founder and Executive Chairman of Fulcrum BioEnergy, has spent the last two decades focused on creating clean, sustainable energy and reducing carbon in the atmosphere.

The culmination of his goal is the Sierra BioFuels Project: a first-of-its-kind initiative which aims to convert 175,000 tons of household garbage into 10.5 million gallons of ultra low-carbon fuel each year.

But in 2017, the Sierra BioFuels Project had hit a snag: project financing.

> *"The fundamental problem facing early-stage sustainable technology companies is project financing. The quanta of capital required is generally pretty large—hundreds of millions of dollars," Jim says.*

Like many startups in the clean tech industry, Fulcrum was struggling to secure funding from risk-averse banks, who often deemed projects 'too risky' and are reluctant to lend when working only with limited information.

> *"In order to make any project financing work, you need to have a significant portion of the capital structure as debt," he explains. "A bank will increase their lending rate to account for risk, but at some point—especially when a project is new or they fundamentally don't understand the type of risk they face—they will say, 'That's just too risky, I won't lend at all.'"*

Having worked on Wall Street, Jim knew what he needed was an insurance partner with special capabilities—a company that assesses technology performance and develops customized insurance solutions. These insurance solutions help protect senior credit providers against technology performance shortfall.

> *"A customized insurance policy that could provide senior credit and debt providers in the capital structure with additional levels of certainty that they won't lose any money," Jim explains. "I knew that's what we needed, but there was no one in the market doing it."*

That's when a colleague told Jim to check out New Energy Risk.

> *Jim says, "When I was introduced to New Energy Risk, I said, 'Stop everything. We've got to talk to these guys right now."*

New Energy Risk was doing something special—identifying and supporting the best clean energy projects and structuring their financing around the exact, calculable risk.

Banks would call a project 'risky' without being able to point at what they were worried about going wrong, whereas New Energy Risk quantified risks by bringing both a financing and an engineering understanding to risk assessment.

> *"I strongly believe New Energy Risk's participation is the reason we were able to raise the money," Jim says.*
>
> *"It's rare to find insurance underwriters who have a real engineering understanding of what you're doing," he adds. "New Energy Risk has a very detailed understanding of what could go wrong from an engineering perspective—and engineering always precedes finance."*

That deep, technical knowledge would ultimately be what Fulcrum needed to finally close a bond and raise money for their project.

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The Solution

A custom-built insurance solution covering long and short-term risks

When New Energy Risk partners with a client, they help them bridge the gap between development and commercial scale deployment by securing an insurance policy that's based upon an understanding of the technical risk.

What makes New Energy Risk unique among insurance providers is that every policy is completely different. They start with engineering data and they use that data to create a model, which will assess the risk of failure and the potential impact of the risk on financing.

> *“In some respects, it's a basic engineering exercise. You start with the engineering, you recognize the potential failure points or risk points, and then you overlay a financial model on it,” Jim says.*

> *"New Energy Risk sat down with the CEO, the CFO, and the heads of engineering. They went through the engineering reports, the balance of the plant, and the work that had already been done. They toured the facilities and they took all the necessary steps to determine which parts of the process were truly risky—which might underperform or break down—versus those that just appear risky on paper."*

Risk assessment is a complex and time-consuming process, usually taking 3–4 months from start to completion. For Fulcrum, the technical analysis took no more than eight weeks.

> *"Banks will call something 'risky' but they don't have the engineering prowess to start with a systematic approach, work out the technical details, and then figure out the financial implications of the risk points and what can be done to mitigate those risks," Jim explains. "You need that level of detail to write this type of insurance—and New Energy Risk has it."*

For New Energy Risk, the entire process boils down to well-established science measuring the reliability and expected efficiency of a project. Their proprietary, data-driven, techno-economic modeling allows them to analyze the likelihood of failure while minimizing the uncertainty around performance and reliability.

In the event of a failure, this projected performance data allows them to determine how long it would take to alleviate—and if there's enough capital to handle the problem. It also helps them assess if delays could cause a shortfall in output great enough to impact loan covenants and debt payments.

> *"New Energy Risk looked at the balance of plant and figured out that the risk it wouldn't work was low—there was just underperformance risk," Jim explains.*

> *"When they dug into the details, New Energy Risk knew the perceived technology risks were minimal in the face of what we're doing in the waste-to-fuel space. They were willing to underwrite the risk of underperformance."*

New Energy Risk's insurance and warranty solutions helped Fulcrum attract financing options that were previously closed to them. They created a custom-built insurance policy that assessed and covered the risk of underperformance, helped pave the way for product adoption and commercial scale, and ensured that future financing would be minimally dilutive.

"New Energy Risk has the engineering prowess to start with a systematic approach, work out the technical details, and then figure out the financial implications of the risk points and what can be done to mitigate those risks. You need that level of detail to develop this type of insurance."

Results

$175M in bond financing (+$35M in savings)

Partnering with New Energy Risk ultimately helped Fulcrum raise $175 million in bond financing. With Abengoa as an Engineering, Procurement and Construction (EPC), a high-quality offtake agreement, and strong equity partners, the future is looking bright for Fulcrum BioEnergy.

With New Energy Risk's help, Fulcrum closed a bond and saved money in the process.

> *"When New Energy Risk got involved, our interest rate dropped by 2% annually from where Morgan Stanley and JP Morgan thought the market would clear on a 20-year bond. That's approximately $35 million in savings."*

But working with New Energy Risk didn't just save Fulcrum money—it also allowed them to go to market with their project much more quickly than they otherwise could have.

> *"Working with New Energy Risk helped us, without a doubt," Jim confirms. "They helped us close quicker, radically increased the probability that we would close at all, and lowered the overall interest rate of the money we raised."*

The huge impact New Energy Risk had on his project far outstripped Jim's high expectations.

> *"New Energy Risk's contributions are significant. They make project returns better; they make it easier to fund debt service reserve funds and all the other contingent capital requirements that we have; and, they increase the likelihood that we'll be able to do more projects in the future," he says.*

New Energy Risk and Fulcrum are both looking forward to many more fruitful years together—and now Jim hopes that New Energy Risk will be able to help other clean energy technology companies get started.

> *"If you have innovative technology but you're having trouble convincing financers to support you, New Energy Risk is the partner you need to bridge that gap," he says.*
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> *"They have the engineering prowess to understand what you're trying to do and the translational skills to pull the financial implications from the technical risk—and they're able to do it better than anyone else I know."*

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"When New Energy Risk got involved, our interest rate dropped by 2% annually from where Morgan Stanley and JP Morgan thought the market would clear on a 20-year bond. That's approximately $35 million in savings."

Deploying your large-scale renewable energy technology isn't a pipe dream anymore.

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