New Energy Risk partners with Bloom Energy on its capital raise with performance insurance

CASE STUDY

"With New Energy Risk's help, we were able to close financing and reduce the cost of our capital, which allowed us to deliver a more competitively priced product to our end users."

Scott Reynolds,
Managing Director, Bloom Energy

Bloomenergy®

Bloom Energy's mission is to make clean, reliable, and affordable energy available to everyone in the world. Its product, the Bloom Energy Server, can deliver reliable, uninterrupted, 24/7 electric power that is clean and sustainable.

HIGHLIGHTS

CHALLENGES

- **Financing a New Technology:** Unfamiliarity to large-scale debt financiers
- **Complex Risk Assessment:** Mix of data types and new technology increased perceived risk
- **Execution Uncertainty:** Risk of delays due to the needs of conventional financiers
- **Utility-Scale Timelines:** Need to offer customers insured warranty obligations

SOLUTION

- Thorough technoeconomic risk modeling to create a risk assessment
- Insurance policies customized to help attract lower-cost, faster investment
- Securing three performance insurance policies between 2013–2015

RESULTS

- Financing for the deployment of hundreds of Bloom Energy Servers
- New bespoke performance insurance product that reduced risk for lenders
- Insured product performance warranty for customers
- Reduced cost of capital
- Time savings and minimal disruptions to operations

Challenges

Secure the highest amount of project financing with the lowest interest rate possible

When Bloom Energy first reached out to New Energy Risk (NER), it needed help solving four challenges that stand between many clean energy start-ups and the realization of their goals.

Challenge #1: Financing a New Technology

In 2013, even though Bloom Energy was a venture-backed company that had raised several hundred million dollars from established venture capital investors (Kleiner Perkins, NEA, Mobius), Bloom Energy's solid oxide fuel cell technology was new to the market and unfamiliar to large-scale debt financiers.

> *"Bloom, as a new energy technology, is always trying to find financiers that are willing to take the risk that the technology is going to perform as advertised in the long run," explains Scott Reynolds, Managing Director at Bloom Energy. "We had the data to prove our performance, but explaining it took a high degree of technical sophistication atypical for the average lender. This is what New Energy Risk brought to the table."*

Challenge #2: Complex Risk Assessment

At the time, Bloom Energy had a mixture of test and continuous operational data from lab-scale, test, and early commercial Bloom Energy Servers. The complex mix of performance data coupled with a highly-engineered electrochemical system that was new in the marketplace made risk assessment difficult for customers and financiers of Bloom Energy's technology, increasing the perceived risk of its power projects.

> *"Investors need to see real, long-term data on performance before they're willing to finance new technology. We had to prove that we had enough aggregate runtime and units in the field to show quantitatively why what we were doing would work," Scott says. "New Energy Risk made it easier by making it simple for investors."*

Challenge #3: Execution Uncertainty

While Bloom Energy had successfully secured financing for its operations and deployments up to this point, much of this capital was early- or growth-stage and expensive. Bloom Energy recognized that access to lower-cost capital would fuel its continued growth. The extra time it takes to attract more conventional debt financiers would increase the perceived risk around Bloom Energy and delay revenue.

> *"New Energy Risk made it easy for mainstream investors to invest in a new asset class because they'd done the intense technical diligence and could prove to the market that we'd hit our performance goals," Scott says. "That provided certainty to our process, which is extremely important to us."*

Challenge #4: Utility-Scale Timelines

Bloom Energy sought to sell its fuel cells under long-term contracts to serve its market. The fuel cell technology requires periodic system refurbishments and replacements during the contract term; for the peace of mind of both customers and financiers, Bloom Energy would need to guarantee the performance of its fuel cells over the long life of its contracts.

> *"When you're talking about a 15-year agreement, you're talking about 15 years' worth of technology performance," Scott explains. "Because New Energy Risk had the technical depth to quantitatively demonstrate we could hit our technical goals, it meant we could convince investors of our ability to stand behind our long-term service commitments."*

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Solution

Multiple performance insurance policies to support the financing and deployment of Bloom Energy’s fuel cell projects

Scott immediately saw the appeal of working with NER. It had the experts on staff to understand technology risk far better than traditional financiers based on deep technical knowledge of fuel cells, and its insurance solutions took risks off the table that other providers could not offer. With NER, Bloom Energy could get into the market and close deals faster.

> *“By participating in the transactions, New Energy Risk provides expertise and analytical rigor to address the concerns of their insurance partners, which makes it much simpler to secure financing and bring other insurers into the deal,” Scott explains.*

He appreciated that NER had the technical acumen to understand Bloom Energy's technology, perform comprehensive risk assessment, and then price insurance against those quantifiable risks.

> *"New Energy Risk was willing to go through all the intensive technical diligence to understand our technology. They have the expertise to quantify what the risk actually is," he says. "We like their innovative approach, and we like their industry knowledge, which is what gave us confidence in the first place that they could get a deal done."*

And it wasn't just one deal. Since 2013, through its affiliate AXA XL (S&P AA-), NER has secured multiple 15-year performance insurance policies for Bloom Energy across three different types of financing.

Here's how it worked:

NER used its technoeconomic models to form a risk profile of Bloom Energy's emerging fuel cell technology. Then, it helped Bloom Energy structure insurance, which was customized to the debt used to finance the fuel cells.

Bloom Energy financed its fuel cells by setting up a Special Purpose Vehicle (SPV) which it used to raise debt and equity. The SPV purchased the fuel cells from Bloom Energy and entered into Power Purchase Agreements (PPAs) with multiple corporate customers. The proceeds of these PPAs were used to pay back the debt and operate and service the fuel cells.

In 2013, Bloom Energy raised its financing in connection with its first insurance policy facilitated by NER.

NER worked with Bloom Energy to secure a larger second policy in 2014 (a bond financing) and an even larger third policy in 2015. The insurance policies were virtually identical but, as Bloom Energy's technology matured, the financial terms of their various capital raises improved and the size of the deals increased.

"Would we have been able to close the financing without New Energy Risk?" Scott reflects. "Probably. But we wouldn't have been able to close at the rate at which we did.

"We trusted them and they trusted us, and we've been rewarded for that. The insurance policies helped us reduce the cost of our capital. In the early stages, when financiers are especially risk-averse, having a closed transaction is a sign of success," he adds.

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Results

More certainty in execution and financing of sales

NER was a meaningful participant in how Bloom Energy scaled. NER helped Bloom Energy secure performance insurance by facilitating a brand new, bespoke insurance product specifically linked to the project structure. NER's work with Bloom Energy allowed it to:

1. Reduce the cost of financing the installation of hundreds of Bloom Energy Servers providing clean, reliable electricity over the term of the financing—the equivalent output from a typical coal plant in one year

2. Reduce the time needed for financing with minimal disruptions to Bloom Energy's operations, creating more certainty of execution
3. Offer customers a unique and cost-effective long-duration Bloom Energy Product Performance Warranty (insured by Indian Harbor Insurance Company, a member of the AXA XL group of companies) to support the generation of electricity over 15 years

> *"With New Energy Risk's help, we were able to close financing and reduce the cost of our capital, which allowed us to deliver a more competitively priced product to our end users," Scott says.*
>
> *"They help you cross the chasm. They help you go from early-stage development to mainstream by doing extremely thorough technical risk assessment and managing risks others do not have the quantitative ability to model and understand," he adds.*

In terms of time savings, Scott is confident that NER's involvement greased the wheels of the traditionally lengthy financing process—and got Bloom Energy to deployment as quickly as possible.

> *"New Energy Risk facilitates investors to more quickly gain approval from their investment committees rather than undergoing lengthy technical discussions with many parties during the credit committee process," he says.*

Above all else, Scott is glad he found a partner that understands the insurance and energy industries and the valuable work Bloom Energy is doing.

> *"Everyone at New Energy Risk is easy to work with and cooperative. They're willing to ask the hard questions but they're also very protective of our intellectual property. We knew they were the right fit for us because of their technical acumen, innovative mindset, and cultural disposition as an organization," he concludes.*

Bloom Energy is now a proven technology, and it no longer requires help for deployments in core US markets. However, NER has continued to partner with Bloom Energy on other insurance-related projects as it focuses on new ventures in different geographic regions.

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You're creating the technology that's changing the world.
We want to help.

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