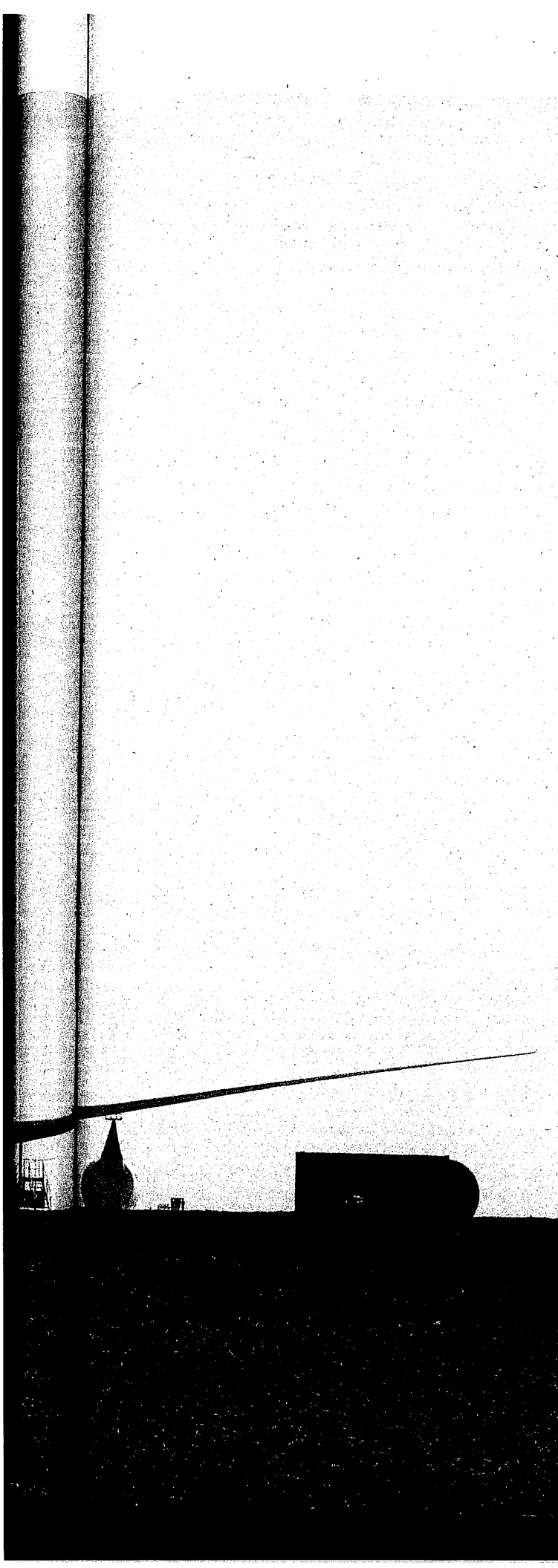




THE WIND AT GREEN ENERGY'S BACK

Clean-energy projects once struggled to attract financing. Then Bank of America found the formula that lured more money into green investing.

BY MATT HEIMER

O KLAHOMA IS AN EPICENTER of fossil-fuel production, a state where oil-well pump jacks punctuate the pastures. But if you drive out to Grady County, an hour west of Oklahoma City, you'll encounter a different mechanical landscape. There, atop the hills outside Minco, dozens of 80-foot-tall turbines churn, their blades generating a steady drone to accompany the occasional dairy-cow bleat and the buzz of distant cars.

This metallic display is part of Pioneer Plains, a sprawling wind-power project that generates electricity for some 42,000 homes. The turbines are part of a high-stakes transformation in the energy economy—a bet that

A DECADE AGO, "MOST ENVIRONMENTAL INVESTING WAS SEEN AS RISKY."

—SUZANNE BUCHTA,
BOFA MERRILL LYNCH



renewable power can scale up as a cost-effective replacement for fuels that contribute to climate change. But the wind farm is also a symbol of financial transformation: It might never have sprouted if it weren't for "green bonds"—an investment vehicle that didn't exist a decade ago.

Those bonds were the brainchild of dealmakers at Bank of America—the \$87 billion, 209,000-employee giant that occupies the No. 3 spot on *Fortune's* Change the World list this year. Their work is part of BofA's \$125 billion Environmental Business Initiative, a campaign that has established the Charlotte-based bank as a powerhouse in "climate finance"—the unglamorous but essential business of steering investor capital into the low-carbon economy. Green bonds, which the bank all but invented, have raised \$442 billion worldwide since 2013, helping borrowers both tiny (the Antioch, Calif., Unified School District) and enormous (trillion-dollar Apple) pay for renewable-energy innovations.

Most environmental advocates agree that a renewable revolution can't happen without a big private-sector push. And a behemoth like Bank of America—with its web of relationships and deep pool of expertise—can make a decisive impact in connecting investors with cash-hungry green projects. "Doing the first-ever commercial green bonds, appealing to institutional investors—BofA gave this market credibility," says Sean Kidney, cofounder and CEO of the Climate Bonds Initiative (CBI), a London nonprofit that tracks green-energy investing. "They've been invaluable."

IN AN ERA WHEN AMERICANS can buy solar power through their local utilities and run errands in Teslas, it's hard to imagine that wind farms or solar-panel arrays ever went begging for funds. But a decade ago, during the financial-crisis catastrophe, that's exactly what was happening. "Risk appetite was really diminished," explains Suzanne Buchta, managing director of ESG debt-capital markets at BofA Merrill Lynch. "And most environmental investing was seen as risky."

At the time, Bank of America was paying a heavy price for misjudging risk. Bad bets on subprime mortgages had demolished its balance sheet. Fleeing investors wiped out more than 80% of its market value, and the bank wound up taking \$45 billion in federal bailout money. Brian

Moynihan, who was tapped as CEO in December 2009, found himself holding multiple rounds of soul-searching with his C-suite team. The bailout had been repaid by then, but the new theme, as Moynihan recalls it, was "Why are we here? Who would miss us if we were gone?"

Bank of America's leaders rethought their mission, retrenching around more conservative investing and basic business and consumer lending. During that pivot, Anne Finucane, then the bank's global chief strategy and marketing officer, became convinced that green investing could fit under that umbrella. The bank had made a \$20 billion commitment to such projects in 2007, and modest successes with projects like energy-efficient buildings had encouraged her and her team. "We were convinced by the business that we were doing that this could work on a larger scale," Finucane recalls, "but we had to prove it."

In 2013 she got her chance: At her urging, Bank of America committed to deploying another \$125 billion for "low-carbon and sustainable business." That mobilized an army of employees to dream up and pitch new projects. Underwriters who could sell ideas to investors; energy-market traders who knew where clean power was in demand; engineers who knew the ins and outs of turbines and solar panels—BofA employed dozens in each category. Finucane, who's now the bank's vice chairwoman, acted as connector and advocate, bringing people from disparate teams together and helping them get buy-in from the top. "If you ask people to think outside their comfort zone, to work and think horizontally, a lot can happen," she says.

"We were taking people off the things that they knew how to do, and putting them on things they didn't know how to do," agrees Alex Liftman, Bank of America's environmental operations executive. "And they came up with ideas twice as fast as we expected."

IN SUCH BRAINSTORMER was Buchta, the debt specialist. An avid hiker and nature lover, she had been mulling how to draw investors into green projects, and she knew bonds had advantages over stocks. One was stability: Bond interest is predictable, and only during major meltdowns do most bonds become as volatile as stocks. That makes bonds hugely appealing to the risk-averse pension-fund managers, insurers, and other institutional investors that oversee the lion's share of global capital. Another advantage was "ring fencing": Unlike stocks, bonds could be structured to require issuers to use the proceeds only for specific purposes.

Beginning in 2013, Buchta collaborated with her counterparts at several big banks, hashing out some broad "Green Bond Principles." A bond, they agreed, could be called "green" only if its proceeds paid for projects with a clearly positive environmental impact. Issuers would have to be transparent with investors about where the money



CHANGE
THE
WORLD



BEFORE AND AFTER: A view of Los Angeles from the slopes of Mount Wilson, before (left) and after the city retrofitted tens of thousands of streetlights with LED bulbs, in a project financed in part by a Bank of America green bond. The orange glow is a sign of the energy "leaked" by traditional sodium bulbs.

went and how the projects progressed, and, ideally, an independent party would certify the bond's greenness. "The brilliant thing about the concept is that it's so simple and so easily accessible," says Buchta. A green bond would offer investors a clear, verifiable connection between their financial commitment and a project that helps the climate.

To test the concept, Bank of America played guinea pig. In 2013 it issued the first-ever "benchmark-size" (that is, big) corporate green bond. BofA borrowed \$500 million from investors, deploying the proceeds into a dozen different projects. The funds paid for turbines at Pioneer Plains; they also helped upgrade some 170,000 streetlights in Los Angeles and Oakland with energy-saving LED bulbs, and enabled Antioch to build solar arrays at 24 schools.

On their own, those small, potentially risky projects would have struggled to attract lenders and would have borrowed at high rates if they could borrow at all. By bundling them and backing them with its own credit rating, Bank of America brought the cost down. (The three-year bond paid 1.35%—attractive to investors in a low-rate climate, but a bargain for borrowers.) And although the payout wasn't huge, the bond issue was oversubscribed: With institutional investors seeking more green opportunities, there was more demand than there were bonds to sell.

The market had its proof of concept—and other borrowers rushed in. The Commonwealth of Massachusetts issued the first municipal bond to be labeled "green," in 2013. The giant utility Southern Co. raised more than \$1 billion for solar and wind projects. Apple issued \$2.5 billion in green bonds in 2016 and 2017, financing an effort to run more of its facilities on renewable power. BofA was the lead underwriter on each of those deals, playing matchmaker to attract investors. To date, it has underwritten \$27 billion worth of green bonds, more than any U.S. bank. At the same time, a broader market has taken off. Since Jan. 1, 2017, there have been \$254 billion in green-bond issuances, according to CBI—more than in the previous four years combined.

Bank staffers take pride in the creative ways they've deployed capital for green causes. At Pioneer Plains (which is owned by NextEra, No. 21 on the Change the World list) and two dozen other energy projects, BofA has used bond

proceeds to make "tax equity" investments, paying developers upfront in return for the right to claim their green-energy tax credits. The deals give the developers funding for construction and repairs; the bank uses the credits to cut its own tax bill. Another BofA project, the Catalytic Finance Initiative, specializes in crafty climate-finance puzzle solving. Last year the CFI team helped Vivint Solar package the cash flows from 30,000 of its residential solar accounts into a \$203 million bond and sell the debt to investors.

BofA doesn't break out how much revenue its environmental business has generated, but underwriting fees, loan interest, and advisory fees have made the enterprise profitable. To date, the bank has deployed more than \$96 billion of the \$145 billion it has committed to green business since 2007. Its own fortunes have improved lately too. Over the past three years, its stock has risen twice as fast as the S&P 500, and profits are up 20%.

In April, four economists released a working paper that gave green-bond fans reason for optimism. They found that municipal bonds labeled "green" paid six basis points (0.06%) less in yield than nongreen bonds—and that the effect doubled or tripled for bonds that took the extra step of being *certified* green. Bond yields fall when buyers drive up prices, so the lower yields suggest that demand for green bonds is stronger than the norm. On a typical muni bond, that could result in millions of dollars in savings on interest. Compared with those benefits, "the cost of certifying a green bond is modest," says coauthor Jeffrey Wurgler, a professor of finance at the NYU Stern School of Business, while borrower and investor alike "get a green glow."

The urgent question is how much bigger and brighter that glow can get, and how quickly. Electric-vehicle production, energy storage, the building of "smart grids"—all are areas where great strides could be made, but only if the private sector can mobilize the money to fund them, at the rate of trillions per year rather than billions. "Public capital is not enough," notes BofA's Moynihan. "But private capital has to be accessed in a way that it's used to being accessed." If green bonds, with their relative stability and familiarity, lure more big money into the game, Bank of America will have done a lot to pave the way for it. ■