

CLEANUP CREW

How a recovering politician (Al Gore), a legendary venture capitalist (Kleiner Perkins's John Doerr), and a bigtime moneyman (Generation's David Blood) struck up an alliance with an audacious goal: making over the \$6 trillion global energy business.

By Marc Gunther and Adam Lashinsky

It's lunchtime on Sand Hill Road, and Al Gore wants answers. "How does the efficiency decline with latitude?" he asks. "What size community could be served by one plant? If a manufacturer like GE wanted to make smaller turbines, would the technology support a smaller scale?" We're sitting in the giant conference room at Kleiner Perkins Caufield & Byers, where the partners hold their weekly meetings. After loading his plate with Chinese food from a buffet, Gore

is firing detailed questions at the management team of Ausra, a Kleiner-backed company in Palo Alto whose technology uses mirrors the width of a flatbed truck that focus the sun's energy to generate electricity.

Once Gore is satisfied—sunlight lags north of South Dakota, an Ausra plant can serve 120,000 homes, and yes, smaller turbines will work fine—he shifts from inquisitor to fixer. He was chatting with California Senator Barbara Boxer "on the way over," he reports, and he isn't optimistic that Congress will extend the tax credits Ausra has been relying on. On the upside, he offers on the spot to organize a summit highlighting the company's solar thermal technology to educate lawmakers and other policymakers on its potential. He also thinks a powwow at General



DAVID BLOOD,
AL GORE, AND
JOHN DOERR,
PHOTOGRAPHED
AT GORE'S
NASHVILLE
HOME ON
OCT. 16, 2007

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Electric would be beneficial, even though Ausra is a tiny customer. "I know Immelt well," he says, referring to GE's CEO. "We ought to set up a meeting."

Gore appears utterly comfortable with this drill, but in fact he's engaging in some on-the-job training. The recovering politician, environmental activist, and Nobel laureate is adding another title to his résumé: venture capitalist. After "a conversation that's gone on for a year and a half," according to Gore, he has decided to join his old pal John Doerr as an active, hands-on partner at Kleiner Perkins, Silicon Valley's preeminent venture firm.

The move is more than another Colin Powell moment (the former Secretary of State signed on as a Kleiner "strategic limited partner" two years ago and has hardly been heard from since). Gore is joining the firm as Kleiner makes a risky move beyond information technology and health-care investing into the fast-growing and increasingly competitive arena of "clean technology." According to Doerr, by 2009 more than a third of Kleiner's latest fund, which was raised in 2006 and totals \$600 million, will be invested in technologies that aim to reduce emissions of carbon dioxide. Already Kleiner has invested more than \$270 million from various funds in 26 companies that make everything from microbes that scrub old oil wells to electric cars to noncorn ethanol. Twelve of Kleiner's 22 partners now spend some or all of their time on green investments.

In turn, Doerr, the master networker whose greatest hits include initial investments in Netscape, Amazon, and Google, will join the exclusive advisory board of Generation Investment Management. That's the \$1 billion investment company Gore started three years ago in London with David Blood, the former head of Goldman Sachs Asset Management, to analyze and invest in publicly traded "sustainable" companies. Over the past five weeks Gore, Doerr, and Blood agreed to give FORTUNE an exclusive look at their new alliance.

Already they've begun to pool information. Generation came across a small company engaged in carbon trading that Kleiner is analyzing, and Kleiner has shared intelligence about which startups could threaten the established companies in Generation's portfolio. In the long term, though, they want to help drive something much larger, "bigger than the Industrial Revolution and significantly faster," as Gore puts it. They argue that to halt global warming, nothing less will be required than a makeover of the \$6 trillion global energy business. Coal plants, gas stations, the internal-combustion engine, petrochemicals, plastic bags, even bottled water will have to give way to clean, green, sustainable technologies. "What we are going to have to put in place is a combination of the Manhattan Project, the Apollo project, and the Marshall Plan,

"What we are going to have to put in place is a combination of the Manhattan Project, the Apollo project, and the Marshall Plan, and scale it globally," says Gore.



communications to influence public opinion. (He estimates that he's shown his homespun slide show on global warming more than 1,000 times, while the documentary version, *An Inconvenient Truth*, won him an Oscar.) Doerr, meanwhile, has displayed a real talent for deploying venture capital to create or disrupt whole industries. In short, the foremost eco-activist and the dean of Sand Hill Road could, together, draw a huge amount of attention and cash to companies that are aiming to reduce our reliance on fossil fuels.

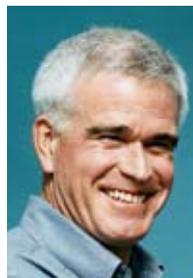
There is, however, one thing standing in their way. Five years after Kleiner Perkins made its first green investment, the firm hasn't had one "exit"—VC-speak for an IPO or a sale of a company that validates the investment thesis. Doerr equates this moment to Internet investing (which he famously called "the greatest legal creation of wealth in the history of the planet") before Kleiner took a certain search engine public in 1995. Now, he

and scale it globally," Gore continues. "It'd be promising too much to say we can do it on our own, but we intend to do our part."

Does that sound grandiose? Sure. Will they be accused of being partisan? Probably. Is there something incongruous about globetrotting rich guys jetting between multiple homes and lecturing the rest of us about climate change? Of course. But there are good reasons to take Gore and Doerr seriously. Gore, who never seemed fully at ease as a presidential candidate, has demonstrated a real knack for using mass

MEET THE CLEAN-TECH TRIO

Blood's the moneyman, Gore has the environmental cred, and nobody knows startups like John Doerr.



DAVID BLOOD
CO-FOUNDER
AND MANAGING
PARTNER,
GENERATION

→ Blood spent 18 years at Goldman, where he ran asset management and was a popular "culture keeper," before hooking up with Gore in 2003.



AL GORE
CHAIRMAN,
GENERATION;
PARTNER,
KLEINER PERKINS

→ You may have heard of him: The former *Veep* is an author, activist, cable TV exec, Google advisor, Apple director, Nobelist, and newly minted VC.



JOHN DOERR
PARTNER, KLEINER PERKINS; ADVISORY BOARD MEMBER, GENERATION

→ A deejay and debater at Rice University, then an Intel salesman, Doerr has been proselytizing on behalf of Kleiner startups since 1980.

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wonders, “what’s the company that will lead the boom? What’s the Netscape of green innovation?”

A BLEARY-EYED AL GORE needs another cup of coffee, and no wonder. It’s a Tuesday morning, and four days earlier he and his wife, Tipper, were up into the wee hours in San Francisco waiting to learn if he’d won the Nobel. (He was cited “for informing the world of the dangers posed by climate change.”) They then flew home to Nashville after a stopover in Phoenix, where Gore spoke to an advertising industry convention about Current TV, the youth-oriented cable television network he co-founded in 2002. Over the weekend, Tipper threw him a party with 150 or so of their closest friends. Country singers Kathy Mattea and Kim Richey preformed at the bash, at Nashville’s Park Café. “It was a good weekend,” Gore says with a grin.

Now Gore, Doerr, and Blood are gathered on the back patio of Gore’s \$2.3 million, 10,000-square-foot home in the Belle Meade section of Nashville. That’s the mansion—to Gore’s critics it’s always a mansion—that tagged the former Vice President as an energy hog. He’s quick to point out that the house generates electricity from more than 30 solar photovoltaic panels on the roof as well as seven 300-foot geothermal wells in the ground, and that it has been certified as an energy-efficient home by the U.S. Green Building Council. After offering everyone coffee or bottled water (hey, no one’s perfect), Gore explains why he’s combining his advocacy work with a profit motive. “We want to give a big shout-out, though that’s not the corporate term, to every inventor and entrepreneur and idea generator at the micro, macro, systems-integration, and global-thinker level to create with this alliance a clearinghouse for the identification and selection of the most promising ideas on the planet for quickly solving this climate crisis,” he says, without pausing to take a breath. Then, clearly catching himself in a moment of speechifying, Gore boils it down: “We all believe that markets must play a central role.”

Professionally Gore, Doerr, and Blood have little in common. Once the boy wonder of American politics, Gore turns 60 in March. In addition to his roles at Kleiner, Generation, and Current, he’s an advisor to Google and a director at Apple. He also founded an advocacy organization in Palo Alto called the Alliance for Climate Protection. At times his schedule seems downright presidential: the week after our interview in Nashville, Gore visited the leaders of France, Germany, and Austria to talk about the environment. Says Gary Hirschberg, a climate-change activist and the CEO of Stonyfield Farm, who has known Gore for years: “I had an easier time seeing him when he was in the White House.”

Technically, of course, Gore was never “in” the White House. But he’s been dealing with continual speculation about whether he still has designs on the place. Is there



DOERR, BILL JOY, AND GORE AT A MEETING AT STARTUP BLOOM ENERGY.

a chance he’ll jump into the race? “It’s a luxury to be able to focus on what

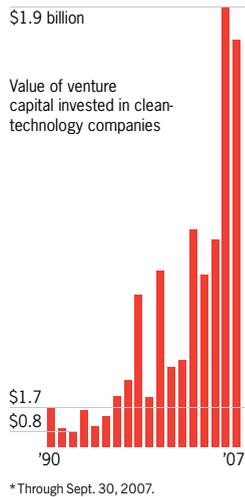
you are most passionate about all the time,” he says. When asked to elaborate he adds, “Casting about for words to describe this with precision is less productive than just saying that what I’m doing feels like the right thing to do.” So the answer is probably not, though like any good politician, he’s left the door open. For now Gore truly seems to enjoy kicking around Nashville, where he’ll continue to be based. Since he won’t be on Sand Hill Road daily, he explains, he’s installed a high-definition videoconferencing system to dial into Kleiner’s weekly partner meetings.

If Gore is the elder statesman of the group, Doerr is the salesman. Famous both for his boundless energy and his high-end hucksterism, at 56 he is wiry and birdlike in his tendency to flit from topic to topic. He specializes in making everyone around him believe as passionately about his current cause—first the PC, then the Internet, now the environment—as he does. Blood, silver-haired and 48, may be the youngest of the group, but he’s accustomed to managing money on a scale that dwarfs Kleiner’s. At Goldman he oversaw the company’s \$325 billion asset-management arm from London. A retired Goldman exec, Phil Murphy, who now raises money for the Democratic Party, introduced him to Gore.

Gore and Doerr got to know each other more than a dozen years ago when they met to discuss technology and education policy during Gore’s vice presidency. They were seen together so often that by the late 1990s, VC Stewart Alsop jokingly printed up and distributed hundreds of buttons that read GORE AND DOERR IN 2004. Doerr says he never considered elective office, but he credits Gore for his environmental awakening.

In June 2005, Doerr invited the Gores and Bill Joy, the former chief scientist at Sun Microsystems and now a Kleiner partner, to dinner at his home. Over coffee and dessert Gore hooked up his laptop to a projector and showed the group the slide show that the filmmaker Davis Guggenheim was just beginning to turn into a feature-length documentary. “I didn’t get it until Al showed his slide show at our home,” says Doerr. (Doerr has on various other occasions credited his conversion to his daughter Mary, Segway inventor

THE SUSTAINABLE INVESTING SURGE



SOURCE: THOMSON FINANCIAL

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Dean Kamen, Bill Joy, and *New York Times* columnist Tom Friedman, a pal and cross-country ski partner.)

Last year Gore and Blood came to the realization that Generation's wide-ranging research into public companies could be put to other uses. For one thing, Generation's investment analysts were coming across all sorts of interesting companies and trends, but since they currently invest in only public companies, they couldn't use those insights. Remembers Gore: "We began to think about how we could develop another way of pursuing these ideas in the market. And I said, 'Hey, the best in the world is Kleiner Perkins.'"

Kleiner had been dabbling in green investing, backing companies like fuel-cell maker Bloom Energy and solar energy startup Miasole. It has financed others that stretch the definition of clean technology to the breaking point: Terralliance has a stealth technology for finding fossil fuels, and GloriOil uses superbugs to increase recovery from mature oil wells. "GloriOil ought not to be named GloriOil," says Doerr, sounding defensive. "It ought to be named GloriMicrobes."

When Gore approached Doerr about a Kleiner-Generation "mind meld" last year, Doerr felt it was worth exploring. Capital requirements for startup IT companies had dropped precipitously, so the timing was good to explore a new area.

Doerr asked a younger Kleiner partner, Ellen Pao, who recently had been hired to make consumer Internet investments,

Doerr credits his own conversion to a dinner in June 2005, which included the Gores as well as Bill Joy. "I didn't get it until Al showed his slide show at our home," says Doerr.



to organize a meeting of 50 environmental thought leaders so that the partners could brainstorm with them about opportunities. They met in May 2006 at the San Francisco Four Seasons. R.K. Pachauri, whose UN Global International Panel on Climate Change later would share the Nobel with Gore, was there. So was Jose Goldemberg, a Brazilian scientist who spearheaded his country's push into sugarcane-based ethanol.

Kleiner was by no means the first venture firm to pursue clean-technology investments. Firms like VantagePoint Venture Partners and

Nth Power were earlier to the sector, and former partner Vinod Khosla, who remains affiliated with Kleiner and works out of its offices, began advocating alternative-energy investments well before Doerr got religion. Today Kleiner has co-invested with Khosla's new firm in several companies, including Ausra.

The shift has ruffled some feathers within the firm. Ray Lane, the former president of Oracle, says some of his partners were concerned that the green focus would distract Kleiner's attention from its historical IT focus. But clearly there's no turning back. When Kleiner announced its latest fund, in February

INSIDE KLEINER'S PORTFOLIO

Here's a look at ten of Kleiner's 26 energy-oriented investments.

Company	Invested Founded	What it does
Amyris Biotechnologies <i>Emeryville, Calif.</i>	2006 2004	Uses synthetic biology to make microbes capable of producing everything from anti-malaria drugs to biofuels for cars and jets.
Ausra <i>Palo Alto</i>	2006 2002	Builds large-scale solar-power farms that offer electricity at market rates. Sunlight, focused by mirrors onto water pipes, boils water, which powers turbines to generate electricity.
Bloom Energy <i>Sunnyvale, Calif.</i>	2002 2001	Develops solid-oxide fuel cells to enable homes to generate their own electricity with half the carbon dioxide pollution of large-scale power plants. Came out of research done for NASA.
EEStor <i>Cedar Park, Texas</i>	2005 2001	Building supercapacitors with high electric-storage density. Can be used in batteries for electric cars.
GloriOil <i>Houston</i>	2007 2005	Designs microbes that, when injected into oil wells, increase oil production and decrease use of water. Based on technology developed at the Energy and Resources Institute in Delhi, India.
GreatPoint Energy <i>Cambridge, Mass.</i>	2006 2005	Catalytic process converts coal , petroleum coke, and biomass into natural gas you can burn in your kitchen. Process also captures the carbon dioxide and sulfur byproducts of coal gasification.
Luca Technologies <i>Golden, Colo.</i>	2007 2003	Discovered naturally occurring microbes that "eat" coal and turn it into natural gas. Luca is trying to cultivate bugs that can be used in mature coal fields where they don't occur naturally.
Miasole <i>San Jose</i>	2005 2001	Has developed a thin-film solar cell that promises to be cheaper and offers a broader range of installation options than traditional crystalline silicon-based photovoltaic cells.
Terralliance <i>Newport, Calif.</i>	2004 2002	Uses proprietary software and supercomputing brawn to more efficiently find and then extract oil and gas deposits.
Verdiem <i>Seattle</i>	2007 2002	Sells software that provides power management for PC networks. With more efficient use of the network, Verdiem claims it can save from \$25 to \$65 in energy costs per PC per year.

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2006, it designated \$100 million of the \$600 million total to clean-technology investments, then raised that to \$200 million seven months later. What do investors like Yale University and the University of California think of the move? In general, having profited handsomely, they tend to give Kleiner a long leash.

With Kleiner ramping up its commitment, Doerr has become ubiquitous in the world of green investing. Last year he was instrumental in helping pass a California bill supported by Governor Arnold Schwarzenegger that will mandate the reduction of greenhouse-gas emissions in the state. Lately Doerr's been driving a plug-in Toyota Prius, and he says his daughter Esther refuses to ride in anything else. He also attracted widespread attention (and a few snickers) when he teared up at this year's techie TED conference while imploring attendees to save the environment. "He has this incredibly intellectual drive," says Randy Komisar, a Kleiner partner. "John is so passionate that he is almost difficult to take on a daily basis."

Entrepreneurs in particular clamor for Doerr's time—and his operations expertise. John Melo, CEO of Kleiner-backed startup Amyris, says Doerr recently helped him select a chief financial officer, structure a critical joint venture, and implement a performance-management system in the company's lab that has helped it double productivity. "I beg for time," says Melo. "Probably the most productive hour or two that I can get in a month is the time that I spend with John."

In front of a group, Doerr's style is part motivational speaker, part grad school seminar leader. At the end of one meeting FORTUNE attended, Doerr suggests that everyone brainstorm about the questions the partnership should consider at its December offsite. Doerr's aide de camp, Wen Hsieh, who holds two technical Ph.D.s from Caltech, scribbles the questions on an easel with a magic marker as Doerr directs the conversation around a long conference table. Doerr himself wants to know how Kleiner's green-tech initiative can have the most enduring long-term impact. Gore wonders how to serve Americans who want to live "off the grid," a favorite topic. Kleiner partner Ted Schlein wonders how Kleiner will react if the price of oil falls dramatically. Partner—and biotech expert—Brook Byers brings up the most immediate concern: "Should we," he

TALKING 'BOUT THEIR GENERATION

Gore serves as chairman of Generation Investment Management, but running day-to-day operations falls to Goldman veteran David Blood.



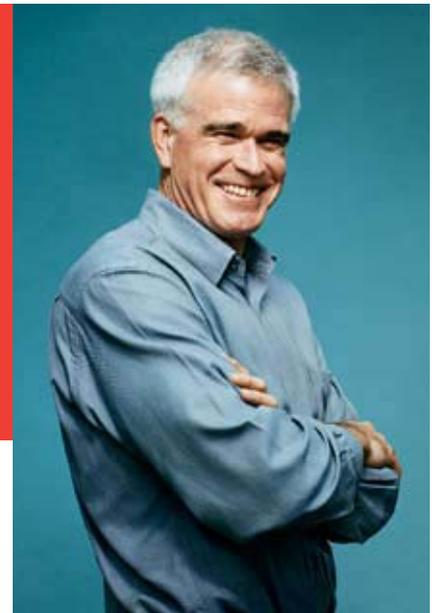
FOUR YEARS AGO
David Blood retired as CEO of Goldman Sachs Asset Management.

Having seen extreme poverty as a child in Brazil, where his father was an auto executive, Blood was looking for a second act that was about more than making money. He and Al Gore started Generation Investment Management with a lofty goal: "To encourage businesses around the world to be more responsible, ethical, and sustainable."

Based in London, Generation combines traditional securities analysis with thematic research into issues such as climate change, water, global poverty, and HIV/AIDS. "Sustainability, defined as environment, social, governance, and ethics, matters to business," Blood says. "It's not only about risk management or cost, but about revenue, profit, and competitive positioning."

The firm invests in about 30 to 50 companies, with a bias toward the long term. Although its holdings, at first glance, appear unremarkable, Mark Ferguson, another Goldman alum who is chief investment officer, explains that companies are selected not just for the quality of their business and management, but because they understand the importance of social, environmental, or workplace issues.

U.S. auto parts supplier Johnson Controls, for example, has a great battery business as well as a line of



energy-efficiency products, Ferguson says. Danish drugmaker Novo Nordisk sells an inexpensive insulin drug and rewards its salespeople for lowering patient blood-sugar level, not for selling more drugs. Other Generation holdings have included AFLAC, General Electric, and Whole Foods Market, according to SEC filings.

The firm currently manages about \$1 billion from institutional investors, including CalSTRS and several European pension funds. Generation doesn't release performance data, but investors say the portfolio has outpaced its benchmark, the MSCI World Index, particularly during the past few months of market jitters.

For a small company, it has a high-wattage advisory board, which meets twice a year to hash out big ideas. That group includes Mary Robinson, the former President of Ireland and UN High Commissioner for Human Rights; MIT professor Mario Molina; Jonathan Lash, president of the World Resources Institute; and technology executive turned social activist Mitch Kapor. And, of course, the group's newest member, John Doerr.

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asks, “be hiring more people with expertise in the energy field?” Looking around the room, it’s obvious that Kleiner employs a plethora of brainiacs and Ph.D.s, but not a single individual with a deep background in energy.

AS A HIGH-TECH LIFER, Doerr knew he’d have to get out of his comfort zone to lead Kleiner into this new era. So during the summer of 2006 he took a trip up the Tambopata River in the Peruvian rainforest to visit a research center run by the nonprofit Conservation International. But he had a difficult time disconnecting. With macaws swooshing overhead and monkeys screaming from the jungle, Doerr fiddled endlessly with a satellite phone and laptop, desperate to check e-mail. Recalls Tom Friedman, who was among his traveling companions: “We were beyond the network, and that makes John very nervous.”

Indeed, for three decades most of Doerr’s best investments were just around the corner from Sand Hill Road, where he could be in close contact with management and leverage his deep network of tech contacts, which, Doerr always has acknowledged, is his greatest strength as a VC.

“You can’t hire an expert in the recombinant-DNA industry when there isn’t one,” says Doerr, referring to the problem Kleiner faced when it backed Genentech in the 1970s.



“I don’t know of anyone in the Kleiner environment who has dealt with the complexities of that scale.” Doerr says Kleiner will hire more experts, but insists that the ability to vet and assist entrepreneurs is more important for venture capitalists than industry experience. And the green field is something of, well, a green field. “You can’t hire an expert in the recombinant-DNA industry when there isn’t one,” he says, making a reference to the similar problem Kleiner successfully faced when it backed Genentech in the 1970s. Gore can certainly help in this arena by, for example, introducing Kleiner people to top atmospheric scientists or government decision-makers. Policy and politics, his specialties, will have a huge impact on the business of clean technology.

Another new twist: The capital requirements in the energy business are massive compared with what’s needed to start a software or Internet company. So while Kleiner’s cash can help companies get going, building power plants or cars requires complex financing that’s well beyond what it can offer.

Doerr understands the complexity of what’s ahead. Most venture capitalists are judged on return on investment alone. Asked how he’ll judge the success of the green initiative, he reels off five measures: “the company we keep, the quality of the companies we help grow, the quality of the partners we add, returns on the investments we make, and by the CO₂ that’s taken out of the atmosphere.”

Balancing those factors is Gore’s challenge as well. Toward the end of the meeting at Kleiner’s offices with Ausra, the solar thermal company, one of the executives starts to boast that the plants Ausra is building will thrash nuclear, geothermal, clean coal, and photovoltaic solar solutions. Gore cuts in, a mildly alarmed look on his face. “You know, all of these technologies are going to play a role,” he says. “I hate to see you assassinate the competition as a key messaging point.”

It’s a reminder of what Gore and his partners are trying to do. After all, making money has always been paramount in Silicon Valley. But these guys have a planet to save as well. **F**

GORE ENJOYS A PEACEFUL MOMENT IN HIS NASHVILLE BACKYARD.

