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THE POWER TO SHAPE THE FUTURE

The Bloomberg New Energy Finance Summit sheds light on clean-energy innovation, generation and integration

When Edison commercialized the lightbulb it was an innovation that enabled entire industries. Today we hope for a similar silver bullet in new-energy innovation—an unknown or untapped technology that will solve the world's energy woes. But there is an interesting aspect to Edison's achievement: Although it unleashed creativity in other industries, it allowed little room for innovation in lighting. More than a century passed before compact fluorescents and LEDs began to supplant the incandescent mainstay.

So maybe we don't want just a single new-energy solution. Perhaps the best thing for the global economy and the world's energy needs is a marketplace puzzle in which wind, solar, biomass, geothermal and other technologies compete to find their place in the new power portfolio.

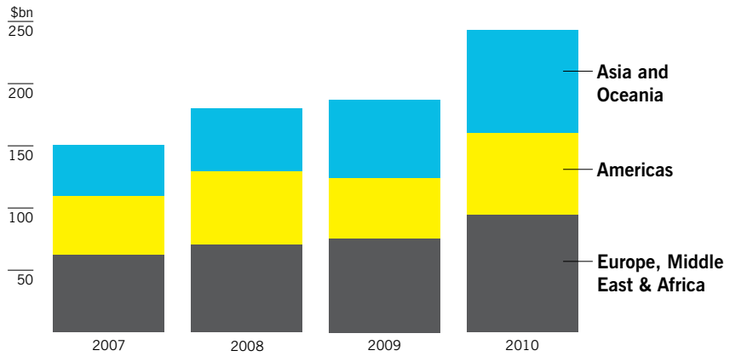
Identifying these puzzle pieces and where they fit in the puzzle is the goal of the fourth annual Bloomberg New Energy Finance (BNEF) Summit, April 4–7 in New York, where executives, investors and policymakers will learn about and debate key new-energy issues. "The emphasis is on helping decision-makers think two to three years out, to take advantage of tomorrow's opportunities," says Michael Liebreich, CEO of BNEF. Previous summits have resulted in billions of dollars of investment, the raising of new funds and the creation of entirely new investment teams.

IF YOU BUILD IT

The theme of this year's summit is "Innovate, Generate, Integrate," three essentials for new energy to fulfill its promise. The past decade has brought new-energy innovations that promise remarkably better performance and lower costs. Wind, for example, is becoming cost-competitive with new coal

GETTY IMAGES

SPENDING LIKE THERE IS A TOMORROW
Total new investment in clean energy by region (in billions)



SOURCE: BLOOMBERG NEW ENERGY FINANCE

plants, and large turbines will drive costs lower. In Brazil, sugar-based ethanol is competing with oil even when the latter is priced below $50 a barrel. Even established new-energy technologies such as hydro and geothermal are making new progress, yet much work remains. "We need for these technologies to get out of the lab and into commercial use," Liebreich says.

Some of those innovations, such as electric vehicles, are already beginning to see commercial success. One example is the Nissan Leaf, the only mass-market vehicle that's powered exclusively by electricity. The midsize, five-passenger hatchback entered the U.S. and Japanese consumer markets in December, and began deliveries to select European markets early this year. The U.S. Environmental Protection Agency pegs the car's combined fuel economy at equivalent to 99 miles per gallon, and its real-world driving range at 73 miles.

Key to such innovation is government support. "Government has been integral to our go-to-market strategy," says Andy Palmer, senior vice president for Nissan responsible for the company's zero-emissions business unit—and a designated thought leader at the BNEF Summit. "That has been especially crucial through the recent economic crisis." In the United States, a $1.4 billion loan from the Department of Energy (DOE) will enable Nissan to upgrade its Smyrna, Tenn. facility to produce the Leaf. And in the United Kingdom, a £20.7 million grant from the British government and up to £220 million from the European Investment Bank will retrofit Nissan's Sunderland, England plant for Leaf production.But which comes first, innovation or policy? "When clean energy becomes cheaper than fossil-based energy, all these issues will go away," Liebreich says. "Clean-energy policy should be judged not by the volume of investment it spurs or the clean megawatts it adds, but by whether it drives down cost."

"If we can innovate, generate and integrate, we can shift the world to a cleaner, more secure and smarter energy system at a reasonable cost."
—Michael Liebreich

TALKIN' 'BOUT SOME GENERATION

The "Generate" in the summit's theme refers to the nuts and bolts of making things happen. From geothermal and bio-energy to wind and solar supply chains, new projects are financed with a mix of private and public money. The key is scale in manufacturing, logistics and project size. Geothermal, for example, is beginning to deliver in a big way.

A subtext of generation is green jobs, as policymakers hope that growing scale equals rising employment. For example, production of the Leaf is expected to create 1,300 jobs at Nissan's Smyrna location and 350 jobs at its Sunderland site.

Meanwhile, markets for renewable energy certificates (RECs)—tradable, non-tangible energy commodities—have emerged in Australia, India and South America, as well as in Europe and the U.S. Will REC markets stimulate the new-energy build-out?

BRINGING IT ALL TOGETHER

Innovation and generation are meaningless if they aren't integrated into existing energy systems. From power storage to smart grids to transportation, integration is where the new-energy rubber meets the road. Integration is already starting to happen. Germany derives more than 10 percent of its power from renewable energy, Spain nearly 15 percent and Denmark 25 percent. "Even Texas generates 7 percent of its electricity from renewable sources," Liebreich says.

Transportation may prove more of a challenge, but solutions are emerging. Nissan is partnering with ECOtotality North America, along with General Motors, in an initiative called the EV Project. The three-year program is deploying nearly 1,500 charging stations in 18 cities across six U.S. states in an effort to maximize the viability of electric vehicles. The project is being supported by a $100 million grant from the DOE.

And innovators like Nissan aren't resting on existing laurels. The company—which Palmer says has already invested $4 billion in electric-vehicle technology—is hedging its new-energy bets with vehicles powered by hybrid technology, clean diesel, compressed natural gas and even hydrogen fuel cells. "The era of HFC vehicles hasn't yet arrived," Palmer concedes. "But we believe that fuel cells will become viable in about 2015."

It's that kind of forward thinking that draws executives, senior policymakers and financial decision-makers to the BNEF Summit. "The ideal participant is the most senior person in an organization who knows the clean-energy, carbon, water or climate topic area as a practitioner," Liebreich says. "Our goal is that everyone in attendance is a new-energy thought leader."

Thought leadership will indeed be necessary if business and government alike hope to achieve the promise of new-energy innovation, generation and integration. "If we can innovate, generate and integrate, we can shift the world to a cleaner, more secure and smarter energy system at a reasonable cost," Liebreich says. And flip the switch on the new-energy future. ●