

## Q&A: Robert Wilder, manager of WilderHill Clean Energy Index

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By Jennifer Zajac

*Robert Wilder is CEO and founder of WilderShares LLC and the manager of the WilderHill Clean Energy Index, which has an independent fund, the PowerShares WilderHill Clean Energy Portfolio. The purpose of the Clean Energy Index is to define and track the clean energy sector — specifically, businesses that stand to benefit substantially from a societal transition toward use of cleaner energy and conservation. Stocks and sector weightings within the WilderHill Clean Energy Index are based on their significance for clean energy, technological influence and relevance to preventing pollution in the first place.*

*Wilder holds a Ph.D. from the University of California at Santa Barbara and a law degree from the University of San Diego School of Law. In addition, Wilder is a visiting faculty member at the University of California, San Diego.*

*SNL Energy spoke with Wilder on Sept. 2 about utilities in the renewable sector, the impact that Hurricanes Katrina and Rita have had on the fund and which renewable fuels show the most promise and the costs associated with them. An edited transcript of that conversation follows.*

### SNL Energy: How did you get into this renewable index and fund?

**Wilder:** About 10 years ago I was an assistant professor at the University of Massachusetts and I was trying to invest my own fairly meager pension money in a clean energy sort of fund, and there was nothing out there. I found environmental funds, but they generally

weren't energy funds; they were based more on toxic waste cleanup and waste management. Then there were energy funds, but they were not at all zero-carbon, low-carbon energy — they were basically fossil fuels. I had been working in the area of pollution prevention and smarter technologies, specifically in the energy arena, so, with a colleague, a fellow named Josh Landess, we put on the Web — my wife was the webmaster — this index. Frankly, it was just based on clean energy technology. Over five, six, seven years, I was studying how mutual funds work and, generally, managers will look for companies to beat quarterly earnings and they're very much focused on finance. They were not, I felt, focused as much on the technology, which was my interest ... so it was pretty different in a number of ways. It was based more on technology than who would beat earnings. It was an index as opposed to an actively managed fund, and it was focused more on clean, or cleaner, energy.

Two years ago, a company called PowerShares approached me and said, "Are you interested in putting this index on Wall Street?" We had been getting from the start about 100,000 hits a month on this sort of garage Web site and lots of e-mails from people who wanted to invest in our index. Well, I wasn't with a financial company, I was just an academic, and I kept telling people, no, no, no, it's not something you can buy, but I sort of began to wish that it was. I did talk to a mutual fund company about the notion of making this a mutual fund. They thought it would be too volatile, and it didn't quite work for me because mutual funds are not

very transparent — you can't see what's in them, they're not tax efficient, there's active management and generally higher fees — and I had an index. But when PowerShares [suggested] an ETF [exchange-traded fund], I really liked that because ETF tracks indexes, so you can see what's in the ETF at any time, and you can trade it intra-day, it's tax efficient, so I moved into this as my full-time work. I started this company, WilderShares, to be the index manager, and we have a team, an advisory board — there are 11 of us that quarterly make decisions about this index.

### According to your Web site, only two utilities are in your index: IDACORP Inc. and PPM Energy Inc. Can you talk about how they're performing and if you think utilities will eventually become a bigger part of your index?

I don't think they will. Utilities, for a long time, were considered "widows and orphans stocks." Their reputation was that they didn't move with great volatility, they offered dividends and were sort of a safe investment. The reason I think that they won't become an especially big part of the index is I do not believe that utilities are a good reflection of the clean energy sector. Utilities are a bit unique in that they are providing the power but they're not, in 2005, clean utilities. We have utilities with some of the most wind power or some of the most geothermal, that sort of thing, but a utility with a large renewable portfolio is going to have 15% or 20%, so that 80% is in natural gas. Frankly, most utilities are still using coal-fired plants. There are some with natural gas, which is better than coal,

but it's still not as good as wind and they're not renewables, so I don't see utilities as capturing the clean energy sector especially well. That's one of our core goals: to capture the clean energy sector. No one else has done that, so we're kind of pioneers and we have to say to ourselves, if we're going to be as intellectually robust [and] honest as possible, we're going to want the pure plays in clean energy, and those are not utilities.

**There's a lot of talk about which renewable fuel makes the most sense for utilities to invest in. What's your opinion?**

Wind has been the way to go, and the problem there has been transmission. The windiest places are generally not where people live. ... Wind makes good sense on a kWh; if you can make wind at 4 cents per kWh, utilities will like that. But again, like here in San Diego, the utilities are going to have to build a transmission line heading east to where the wind farms would be to bring to customers.

There's also hydro. We don't have a lot of hydro in our index for biodiversity, ecological reasons. Large-scale hydro power has pretty significant impacts ecologically. I come from a marine biodiversity background and we're well aware of the impact of large-scale hydro. That said, we're always looking for micro-hydro. I bought a property here, it's about an acre and it's got a little stream going through it. I'm going to be installing a micro-hydro plant there. That, ecologically, has a very small footprint. ...

Another one utilities use to a lesser extent is geothermal. That, obviously, is very constrained, depending if there are geothermal resources — same with hydro. Wind has been a little bit more

pervasive. A very large leader in that is FPL Group Inc. We don't have them [in the index] simply because they are a nuclear utility for the most part. Nuclear is a really tough issue. There are some that love nuclear. ... I think at the end of the day you have to consider nuclear nonrenewable and presenting some pretty unique and significant risks that I think the typical renewable doesn't create.

**You haven't mentioned solar, and you're a man with a solar-powered roof. Edison International's Southern California Edison Co. just invested in a solar facility.**

I think that's great, but that's the thin edge of a wedge. It's a very different approach, basically using solar thermal with an external combustion engine. ... I think it's wonderful, I applaud it, it's the first large example of this. I guess the only reason why I didn't include it is that it's not quite here yet. ... You can go a bunch of different ways with solar. Here, on our rooftop, we use polysilicon, so we have solar photovoltaic, which directly converts solar to electricity using a large semiconductor, like a transistor. It's very expensive, but the state paid for half of it in our case, and we have all the costs on a spreadsheet at our Web site, at [www.wildershires.com](http://www.wildershires.com) ... but that's not a practical way for a utility to generate power. It's just too expensive.

**Are costs going to go down anytime soon? Are these high costs in wind and solar just a blip due to the shortages of turbines and silicon?**

The solar [costs are] self-inflicted. The silicon manufacturers did not realize how much silicon would be in demand, and it takes them a while to ramp up production. That's a blip. It's

going to be a year, maybe two or three — I don't know if that fits in with the definition of a blip — so, for companies like SunPower and Cypress Semiconductor Corp., it's painful. They're getting all these orders and it's hard to meet them. With wind, again, I don't know if I'd say [it's] a blip since the transmission capacity constraints are pretty serious. You can make them go away, but it requires some conscientious decisions on the part of the people voting in bond measures and, more to the point, utilities saying, "OK, we'll build these power lines toward the windy areas." I would tell you that PVs for utilities ... are simply too expensive. ... There are other ways, such as the Stirling [project with Southern California Edison], which is a solar collector focusing light on an external combustion engine, like the Stirling engine. That's the cheapest, [but] it hasn't been done before on a large scale.

**In the near term, tell me what Hurricanes Katrina and Rita have done for renewables.**

I can only really speak in terms of my index. We came out in March and it was growing well, growing steady at \$10 million a month. For the first five-and-a-half months it grew to about \$55 million. Since Katrina hit, we've gone from a \$55 million fund at the end of August to, at the end of September, a \$150 million fund, so we tripled our assets since Katrina. The index is up 48% from when we came out on Aug. 16, 2004. It's probably up roughly 25% to 30% over the last few months.

**Do you think these investors are here to stay?**

The thing that always worries me is that people chase performance. I do get concerned that some investors may be

thinking that past performance is an indication of the future and, the fact that it has gone up so much in the last few months, I think some people are expecting that to continue. Rarely does that ever continue; in most cases a spike upward is followed by some sort of plummet. There's a regression to the mean. ... We try to make it abundantly clear that this index is very volatile, that it can really drop quickly and with greater force than your typical mutual fund; we're not trying to be defensive. We feel that if the sector is dropping really fast, we want to capture every ounce of that drop, so if fuel cell stocks drop very fast, we can capture that. We're not trying to avoid that, we're embracing that.

#### **What sectors in the index stand out to you for long-term plays?**

I'm personally inclined toward wind companies as being among the most cost effective right now, at 4 or 5 cents per kWh. The problem as an index provider is that there are just not many

U.S. wind stocks. Wind companies are in a good place. I think solar is behind [wind] but coming up as more subsidies make solar more desirable, especially in Europe, where they're manufacturing solar to the hilt. There are buyers in Asia, Japan, Germany — that's going to push down prices eventually, once the silicon manufacturers get up to speed.

There's a lot of hype about fuel cells. In our index we have proven technologies — I regard wind and solar well-proven, more or less practical now, economically viable. ... Sure they work, but [fuel cells] are among the most speculative of sectors in our index. I'm not convinced that they're going to make it, that they're going to have commercially viable products at prices people can afford. ... If they do, my gosh, that's a disruptive technology and it's going to be huge, and that's why the stocks get bid up so high on speculation.

#### **How far off are we from any of these energy technologies revolutionizing**

#### **the way we use power in this country in the way that cell phones have changed the telecommunications sector?**

Some utilities are starting to get 9% to 10% of their power from renewables. That's still mostly hydroelectric, which I don't consider to be as good as wind or solar from an ecological standpoint, as I've said. I think, compared to Europe and Japan, we're well behind where we should be. It's embarrassing to me that a company like Ford has to license the hybrid technology. I wish that our U.S. company was in the forefront, that we had the intellectual property. Instead, we're at the mercy, so to speak, of how much other countries will give us of these technologies. We shouldn't be in second, or third, or fourth or eighth place [globally] with clean energy. ... I don't think we're going to stay there, I just think the situation is soon going to be getting so out of hand that people will start naturally looking for cars to get better gas mileage and looking for ways to make their own power.

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