



*Suffolk closeup...*

BY KARL GROSSMAN

## BOB CATELL AND THE FUTURE OF ENERGY ON LI

"The Future of Energy on Long Island," was the topic of a recent talk by Bob Catell, a Zoom presentation, part of the series of varied talks sponsored by Long Island Metro Business Association. (I spoke before LIMBA a while back on the deadly dangers of nuclear power.)

Mr. Catell is former chairman and CEO of Brooklyn Union Gas, what was the best utility in the New York Metropolitan Area. Its excellence was why when the Long Island Power Authority was created, it chose Brooklyn Union (which changed its name to KeySpan) to operate LIPA's electrical system.

Mr. Catell is now chairman of the Advanced Energy Research and Technology Center at Stony Brook University and chairman, too, of the New York State Smart Grid Consortium.

He "is a legend in the energy industry," said one of the folks on the online Zoom event.

"We're moving to renewables," declared Mr. Catell. He noted how New York State is committed to generating 70% of its electricity from renewable sources by 2030 and 100% by 2050. It's the most ambitious green energy initiative of any state in the United States. Codified under the Climate Leadership and Community Protection Act, it was passed by

the State Legislature and signed into law by Governor Andrew Cuomo last year.

"It's one of the strongest climate change laws in the world," Ken Girardin of the Empire Center for Public Policy has said. "It's a heavy lift, but not as difficult as coping with the effects of severe climate change if action is not taken."

As to where all the green, renewable energy will be coming from, Mr. Catell said much will involve solar energy—and he detailed major solar projects underway in the state—and ambitious plans for wind energy, largely from off-shore wind turbines. The state plans to generate many thousands of megawatts from wind with turbines off Long Island and New York City. Solar and wind are a perfect combination, said Mr. Catell, because "wind blows strongest at night" when the sun doesn't shine. And this mix, said Mr. Catell, would be complemented by "hydrogen produced from water."

A dozen years ago I was out at the federal government's National Renewable Energy Laboratory in Golden, Colorado where early work was being done on the production of hydrogen from water. I was at NREL on a shoot for my national TV program, *Enviro Close-Up*, and was amazed as senior scientist Dr. John

Turner demonstrated the use of solar power to split the components of water—oxygen and hydrogen—with the hydrogen then becoming available as a carbon-free fuel. He flipped a switch and hydrogen was generated in a process called photoelectrolysis. "What we have here now is sunlight to hydrogen," said Dr. Turner. "Hydrogen can be used in automobiles in fuel cells, to power our homes, to power our cars, to power our society...It's the forever fuel." He spoke of "the vision of a non-polluting energy society" with "an energy supply that is inexhaustible and non-polluting."

And last month, while Mr. Catell was talking here about hydrogen, in Florida a \$65 million plant to generate "green hydrogen" using solar was advancing, seen as opening in 2023.

On the New York State emphasis on offshore wind turbines, I asked Mr. Catell about the opposition by some commercial fishing interests and also some residents of Wainscott, where a cable from the proposed South Fork Wind Farm is supposed to land. "You need to engage these people and alleviate their concerns," said Mr. Catell. Fishing interests "have a legitimate concern" about disturbances to "the sea bed" and "we have to be sensitive" to their worries and

"move" proposed wind turbine sites and cable routes when necessary. Still, he pointed out, offshore wind generation has been successfully done in Europe on a wide scale "for many years."

Mr. Catell also talked about the "move to electric vehicles" and it being "accomplished at a reasonable cost." With start-up Tesla and its electric autos becoming this year the world's most valuable carmaker, overtaking Toyota, the future for electric vehicles is bright.

Ernie Fazio, chairman of LIMBA and a co-author of the book *Maglev America* about the Maglev train—a train that moves with non-polluting magnetism—spoke at the event of it being "what we need for mass transportation" and ideal for Long Island. Mr. Catell was supportive.

Also, Mr. Catell discussed geothermal power, heat pumps, energy efficiency and gains in "battery storage." He said the Advanced Energy Research and Technology Center he chairs "is focusing on every aspect of the energy chain."

Green, safe, renewable energy technologies can provide all the power we need—energy we can live with. A renewable energy windfall has arrived.