

'We'll get what we need to get done'

A CEO speaks to the realities of decarbonization and sees the future happening now

*In a recent interview with Boston Public Radio, **Bill DiCroce**, executive chairman of **Vicinity Energy**, managed in about 20 minutes to cover the historic virtues of district energy, its enduring versatility, the role of public policy – federal and local – and his bullish outlook on the industry. The excerpt here has been lightly edited for clarity and space..*

ON THE ENDURANCE OF DISTRICT ENERGY:

“ District energy pretty much exists in either urban cores or campus settings, stadiums, hospital complexes, so it's a place where there's lots of building that needed to be heated or cooled and electrified. Some cases just heating, some all three. In Boston, these systems were built – we're in 12 cities, by the way – but in Boston and Cambridge, systems were built back in the day by Boston Edison, almost 100 years ago, so we have an energy network in the streets that moves high-pressure steam around to buildings. And then above ground we have plants.”

ON THE INDUSTRY'S TRANSITION:

“Historically, the energy network doesn't change, the plants do. Eighty, a hundred years ago, it was a coal-fired system. In the '50s, it went to oil. In the '90s, it went to gas. What happens is, you change the fuel at the plants – those above-ground plants – the steam that goes to the buildings doesn't change, so the buildings don't have to do a thing as we continue to change. About six years ago we also introduced biofuel – we work with a company that collects oil from restaurants around the city, and you wouldn't believe how much there is, like millions of gallons a year. But the latest thing we're going to do is electrify, so instead of making steam using our big co-gen that burns natural gas over in Cambridge, we are going to convert to electrification so that all those buildings that are connected – which is 75 million square feet in Boston and Cambridge – what we're going to do is change the fuel source again, to use renewable power. We're going to make it easy for

all those buildings connected. We'll do the change at our plant. Instead of using methane to run a big co-gen, we're going to import electrical power. As you know, electrification, to add all these wires and retire the gas, electrical utilities have a big ask on their hands. In our case, we're the 'easy' button.”

ON INDUSTRY MOMENTUM:

“At Kendall in Cambridge, we've already installed a huge electric boiler. It's 42 MW, it's about two and a half stories tall, it'll go online this month. We'll buy renewable power off the grid, and then we'll turn it into steam and send it out to whoever wants it, to our customers who want eSteam. The big district energy user groups are hospitals, government buildings, office towers and entertainment – stadiums, things like that. City Hall and the public library and many other public buildings are fed by us, and with everybody else it's institutional goals or policy that drive conversion over to renewable-based energy. They're all moving in that direction – some faster than others – but we see the institutional buyers, particularly multinationals like

big pharmaceutical companies over in Cambridge, for example one headquartered in Basel, Switzerland. Basel says, get to net zero now, and guess what, they pick up the phone and call us. There's 40 miles of steam pipe under Boston and Cambridge. It's a network that runs from Boston Medical Center all the way through downtown and over to Cambridge.”



Bill DiCroce, left, executive chairman of Vicinity Energy, leading a tour of the company's Kendall plant in Cambridge, Mass.
Vicinity Energy

ON RECENT ADVANCES IN TECHNOLOGY:

“The next thing we're going to install is North America's largest heat-pump complex – industrial scale. It's ongoing now. We're copying what's been going on in

Denmark. It's existing technology that's been adapted. We'll use the thermal energy in the Charles River, which is presently an untapped renewable resource. We used to heat that water up, now we're going to cool it down. We'll take about 80,000 gallons a minute of water out of the Charles, which sounds like a lot, but

for the Charles is not huge. Say we'll take it out of the Charles at 50 F, we'll send it back at 45. We'll use this monstrous heat-pump complex to cover about 40 percent of our load. And remember I said we touch 75 million square feet. I'm going to give you my corny phrase. We love renewables – solar and wind – but the sun doesn't always shine, the wind doesn't always blow, but the river always flows. We will have that untapped source 24/7, 365."

ON NUCLEAR ENERGY:

"If you look at the Holy Grail of what the grid is going to look like in the future, you need dispatchable assets – you don't need to worry about when the sun is out, and the wind is blowing – plants you can turn on and off. That would look like nuclear and hydro as your dispatchable assets and then load on all the rest of the renewables you can get your hands on. Policymakers finally are starting to realize that. We have another big system

in Philly – like Boston and Cambridge – and in Pennsylvania obviously they're interested in natural gas because of the Marcellus [shale formation], but they have a lot of nukes still and they're doing a lot of work to shore up and at least maintain the reactors they've got. Hopefully we've turned a corner and we start building more reactors. That is a must in that future vision of what the grid is going to have to look like to really get rid of fossil."

ON FEDERAL POLICY MATTERS:

"The demand for our product is just absolutely taking off, although we live in an environment in which Washington has frankly been a bit confused on environmental policy as political cycles change. We're lucky enough, though, where many of our systems are in states, like ours, and cities, like Boston and Cambridge, where they took the bull by the horns. Washington policy matters, and

I'll give you an example: Biden's executive order for the Government Services Administration – that's all the buildings the government owns – said get 'em to zero now. We saw a huge uptick because with that will and that funding – we serve a lot of GSA buildings around our 12 cities – they're all converting fast. That's a place where Washington policy matters. But when it vacillated, or when it went in the wrong direction, the states and cities said we don't care, through zoning laws and their ability. I'm confident, frankly, that even if Washington goes in the wrong direction, we'll get what we need to get done. 

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