VAL JENSEN

Sees the Future,
It's Connected
Communities

### You've recently assumed a new role at Exelon, tell me about it.

A little over a year ago, I moved over from Commonwealth Edison (ComEd) to take a new job—a newly created job—to manage strategy and policy for the combined Exelon utilities. My job is to work with each of the six companies, and all of them collectively, to develop a strategy for how the utilities will evolve and to establish the policy that will enable that strategy.

What does that look like for you day-to-day?

It has two big pieces as the names implies—strategy and policy. The strategy side began with a fairly high-level sketch of what our strategy would look like that we presented to the board last September and they approved. Since that time, we have been working to identify the specific capital investments that would be needed in our grid infrastructure and our customer infrastructure to accomplish that strategy.

The second part of the job is working with each of the utility companies to identify policy investments—the policy areas that we want to focus on—that enable the capital investments that will ideally be accepted by policymakers. Our current focus areas include electric vehicles, storage, energy efficiency, distribution planning, and decarbonization.

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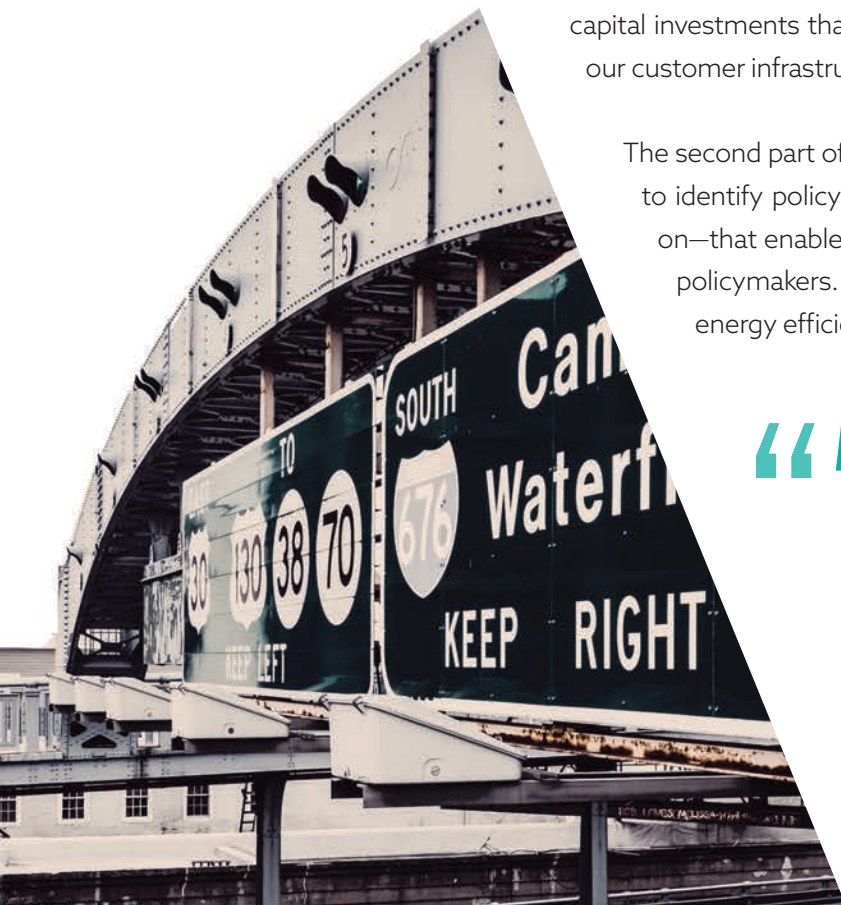
What would you define as success in your role?

This is a long game. We're looking at 2030 in the shortest term but realize that this will play out beyond that. To explain this, I need to explain the strategy itself.

We began a number of years ago to try to answer the question: What is the utility of the future? Like most utilities, we spent a lot of time looking at trends in distributed energy resources and customer behavior and realized after three or four years that it was a completely unsatisfying exercise.

We were trying to predict when certain things were going to happen and then determine what kind of behavior we would need to respond to that. We realized that these trends were always changing.

We stopped in our tracks and asked ourselves, **"What do we believe is true? What do we know to be true about the world that we operate in?"**

We came up with a pretty short set of things:

1) Technology will continue to get better, faster, smaller, cheaper, more interconnected, more powerful.

The technology that is fundamental to our operation, or tangential—technology that our customers use—had been and will continue to get better in many ways irrespective of us.

2) Customers want to be in control, and they want choices.

As managers of natural monopolies, we have been lulled into believing that customers like and expect to be served by a monopoly utility. We forgot that, given the chance—and that chance is increasingly enabled by technology—customers will make choices that erode monopoly position. There is no monopoly in history that I'm aware of that has survived the onslaught of technology.

These truths, combined that with the fact that the climate is being profoundly changed as the result of the things that we do, quickly gets you to a set of plausible futures.

That's where we had been a couple of years ago. The world can only look certain ways given these core truths. We then added onto that an understanding of what our business was. I think most utilities have continued to believe that they are purveyors of kilowatt hours. It became clear to us that that's not what we do.

We are restructured. We operate in restructured states. Kilowatt hours are not something that is core to our business. I know that sounds strange, but we really just operate these networks—these increasingly digital networks—that connect customers to suppliers, and suppliers to suppliers. We connect people to make it possible for them to do what they want to do. And yet, we have this business tied to kilowatt hours. This inevitably led to the question, what business are we in?

We landed on an idea that has become quite popularized in the past couple of years: We are a platform. We enable and curate transactions. Fast forward to a year ago, we have these truths and this business model, but what we were lacking was a sense of how those ideas could be combined to produce an actionable strategy.

One of my pet peeves about strategy as practiced is that it's too often seen as an exercise in predicting and responding. In fact, I think strategy is about being very deliberate about what we want to happen or to become, and then pursuing those options that have the highest likelihood of getting us closest to that place. Accepting that even the most deliberate strategy is probably not going to perfectly hit the mark over time, the probability that it misses the mark is way higher if you don't even know where or what the mark is.

To make this long story shorter, we decided that we wanted to deliberately build what we called connected communities. We have a long and rather formal definition of what those are to us, but when you boil it down, it's a 21st century version of the public service company.

That fact that we're physically connected to literally every entity in our jurisdiction creates an opportunity to use those links to enable not only more energy service transactions, but more social and economic connections as well. We can help connect communities within our cities and ensure that the places we serve remain vital and healthy and growing.

I can't pick up and move to Arizona and start a utility. I'm stuck in Chicago and Washington and Philadelphia and Baltimore. My future rides on the future of those communities and we want to be very deliberate in our work with these communities to build healthier, more connected places for our customers to live and work.

As we spent more time thinking about how to turn these ideas into something real, it occurred to us that we had some growing up to do. I don't mean that flippantly. We thought about the journey from here to the connected community as a maturation process, a process of acquiring the capabilities our network would need to function as the platform for connected communities. We concluded we need four sets of capabilities.

Those capability sets include **(1)** getting really good at reliability and customer service, **(2)** becoming more sophisticated about security and resiliency; ensuring that this platform can overcome challenges both physical and cyber, **(3)** creating increased choice for our customers through distributed energy resources, accommodating—fairly and efficiently—all of the resources technology is bringing to our cities, and **(4)** decarbonization, building on the other three stages to help our cities decarbonize. This is a combination of enabling customers to connect to zero-carbon sources of electricity and converting end uses that use fossil fuels to electricity, starting with transportation.

Taken together, this vision represents significant capital investment. What we are going back to the board with this year is a much more detailed manifestation of the high-level picture we presented last year. We're still aiming for connected communities but showing them what we need to invest in and build to enable that to happen.

The strategy for me is reinventing this business, and the exciting work now is helping our six utilities figure out how they work with their six communities to make this connected community a reality.

For example, in Chicago there is a neighborhood called Bronzeville that we're working with to explore how microgrid technology can be combined with distributed energy resources and some really interesting ideas about how customers relate to one another to build a ComEd version of the connected community. We are looking at similar efforts in disadvantaged communities in Washington, Philadelphia, and Baltimore. The theory is that these initial communities are seeds being planted in our six jurisdictions. As we make further investment, the number of connected communities within our territories grows to the point that we ultimately have a very different kind of utility that is much more **distributed, decentralized, democratized, decarbonized**.

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What do you view as the role of these competing businesses—the Teslas, Googles, and others—that are looking to bring distributed generation and other IoT (Internet of Things) technologies that are not necessarily interoperable into the connected future?

Our platform, if it works well, allows the customer to connect to whomever they want to for energy service. My job is to make that connection possible and efficient. That's the job I feel like I'm pretty good at as a utility. In fact, the more Googles and Teslas and others who use my platform to connect with customers the more valuable my platform becomes. By establishing that value, it's easier for me to make the case to policymakers that I need investment in the platform to facilitate these kinds of transactions. So, in the near term, these third-parties are really valuable to our customers and our business model generally.

If a customer continues to plug into my network, it's not so essential that she gets everything through me. But there are some utilities that hope to own the behind-the-meter customer relationship and obsess about losing their connection with the customer. I would agree that losing touch with customers is a bad thing with bad consequences in any business. Hope is not a strategy and there are many ways to remain relevant, all of which, in the end, boil down to finding ways to bring more value to that customer. I don't think we can do that by ourselves. But I do strongly believe that I can do that by being the platform that allows my customer to wring more value out of her connection to the grid that we run.

I'm never going to be as innovative or quick-to-market or flexible as a start-up. Our solution—which is still to be tested by time—is to at least make sure that if this start-up has a product or service my customer might want, I help make it possible for my customer to get access to it. Whether that ensures long-run business success for me, I can't say. But I do have a strong sense that if I can't make it possible for my customer to get access to it or worse, if I deny access to it, I'm one step closer to oblivion. I will focus my capacity for innovation on making my platform as easy to use and efficient as possible.

To your question on interoperability, I think it's to everyone's advantage that there be at least some basic level of interoperability such that everybody can plug into the grid and use it to do what they need to do, accepting reasonable limits to ensure reliability and security for all customers. One of the enduring lessons I chose to take from the Apple story is that if you build a closed system, you've locked yourself out of a majority of the market. Maybe it's not exactly a "let a thousand flowers blossom" situation, but I do think it is the right and the wise approach to let our customers have access to as many products and services as possible. Our job will be to help curate and facilitate.

One of the first pillars of your strategy is one of resiliency and reliability—the primary mandate of a utility alongside equity. How do you set yourself up to provide this as you are working in a world with so many actors on the grid?

Really good question. We've approached it from a couple of different angles. The one that has dominated most recently emerges from our thinking about climate change. We began with a really serious look at what it would take to limit temperature rise to 2°C. Tough problem, but there are pathways to the result. However, as we pursued that analysis we began to be dogged by the question: What if China or India doesn't think the way we think about mitigation? What if not every country, state, city, and business actually does what is needed to limit emissions sufficiently? Put aside the fact that we might invest lots of money in things that ultimately don't produce the result we needed. If we do not succeed in limiting temperature rise to 2°C what climate change-induced impacts will we be faced with and what will it take to adapt to those impacts?

That led us to an exploration of climate change vulnerability and to an initial look at the investment that would be needed in the grid to enhance its resilience in the face of climate change impacts. The obvious first-order conclusion was that our systems were not designed to be resilient in the face of increased storm frequency and severity, sea level rise, and extreme heat.

> ## "We're trying to rethink affordability from the ground up."

Resilience in the days when this system was being built went hand in hand with building a large, interconnected system. I think that interconnectedness is still a huge piece of what resilience means. But with distributed energy technology and control systems getting better and better, resilience can be enhanced through a more distributed grid; the system can be made less brittle, so that major events won't necessarily be catastrophic.

How is Exelon thinking about equity, and where do you see that playing in the future of connected communities?

We probably are not as precise as we could be when we use the word "equity." Sometimes we mean that people in like circumstances are treated similarly, sometimes we mean that everyone has access to the same options, and often we use equity as shorthand for affordability and specifically affordability for those customers facing economic hardship. Each of these meanings presents some challenges that we collectively need to work through. But affordability for us is a threshold issue for the industry. I think that either we exert some leadership, think differently and help figure out a more comprehensive and sustainable way to ensure affordability, or we greatly diminish our right to shape our own future.

The traditional approach, as you know, has involved some combination of charging certain people less to make it easier to pay bills, giving away money to people who can't pay their bills, and low-income energy efficiency.

Giving the money away is, if you really think about it, really about finding ways to pay ourselves—the utilities. That money just gets recycled. The energy efficiency piece is sort of interesting but it's completely inadequate to the problem. We've been spending a huge amount of time with not terribly great results.

Affordability is code for income insecurity, for not having enough money to afford everything needed to lead a safe, healthy life. And that puts the issue of affordability, in some peoples' minds, way beyond what the utility industry can resolve. We get that. But acknowledging we can't solve the problem by ourselves doesn't mean we have to accept that the things we currently do are the only things we can do.

Income insecurity is a problem that affects close to 30% of our customers, which means it is deep within our communities. So, we're trying to rethink affordability from the ground up and to re-envision how we would approach this with some combination of traditional financial assistance and energy efficiency, rate design and billing reinvention, community development, workforce development, innovative community-based energy projects, and access to clean transportation. All of the dimensions of community building that, taken together, add up to whether a household can afford to participate in this energy economy. This, in many ways, is the essence of the connected community we want to help build.

I'll quickly add that we don't know how to do this. It's probably fair to say it isn't a core competency. So, we are trying to assemble a group of smart people from around the country to start a conversation of what affordability and access means in the utility industry. Can we collectively change how we think about this problem and get some ideas that are more comprehensive, more sustainable, community-based and (the toughest one) more scalable. The way we are doing this now is not ultimately sustainable and it's not scalable.

If we really want to re-envision ourselves as a public service company for the 21st century, part of that mission is to solve for a more durable solution to affordability. The old public service companies came to this late in the game and the job was never one of ensuring that everyone could pay for energy, it was making sure everyone had access to it. As society has matured, our notion of what affordability is has to evolve as well. It sounds grand, and I don't have any idea how to do it aside from starting to make calls to the people who might be willing to help us start to figure it out.