UTILITY EXECS' ROUNDTABLE

Utility's Role in Electricity's Future

PART II

We continued the conversation with execs from seven utilities in the Northeast who help lead their companies on future strategies

Navigant and *Public Utilities Fortnightly* convened a roundtable of utility execs to peer into electricity's future. Hosted by Con Edison, execs from seven utilities in the Northeast U.S. took part in the discussion.

So, we all agree that change is coming and that there is an important role for the utility. But what does that mean specifically? In part II of our roundtable, led by Navigant's Energy Practice Leader, Managing Director Jan Vrins, we discuss how new products and services are expected to create new revenue streams for utilities, augmenting the (slowly) declining traditional revenue.

How does a utility change the way it interacts with its customers? How will utilities change internal operations beyond the traditional silos? And how will they stay ahead of the many competitors that want a piece of these new energy products and services?

From listening to these utility execs, it seems the death spiral is a myth. Utilities have already started to adapt to a new energy reality, where providing basic power to customers in a safe, reliable, and affordable way is only part of the business. Utilities will now orchestrate a more intelligent, distributed, and cleaner grid, offering new, enhanced, and individualized energy products and services to their customers. And they will be ready to compete.

– Jan Vrins, Energy Practice Director, Navigant

Jan Vrins, Managing Director, Navigant: The next question is what regional value streams of utilities may lessen, and what revenue streams may develop. It's good to take a longer-term view, because it won't happen overnight. But it will happen ten to fifteen years from now. Look to that period for your products and services, and where you will create value for your customers.

Jorge Cardenas, Vice President, Asset Management and Centralized Services, PSE&G: In New Jersey, policy is something we do our best to influence and then follow. We've been able to play in markets that in other states, utilities don't get to play in. Energy efficiency and solar, for example.

We've invested four hundred million dollars in energy efficiency in hospitals. If you own a hospital, you don't want to put three million dollars into a brand new efficient HVAC system. You want to put it into your operating room, so we do that for them.

We're allowed to earn our return on that. Another example is solar. Our saying is, "A solar farm on every landfill." We have many of those that are brownfields, and we'll go out and put solar over them. We've been very successful with those investments as well.

We continue to ensure that our patient capital finds a home in areas that allows us to participate rather than be kept out, consistent with state policy.

In addition, we're one of the very few companies in the country that has an appliance service business. We're in people's homes every day. It generates good will, and it's a nice, steady contract business that brings in revenue with fairly good margins. The margins at the time of a rate case are used to offset revenue requirements for customers after the rate case is settled.

I don't want to pull out and crawl behind a washing machine anymore. I don't want to climb up into my attic to fix an air handler anymore. There are a lot of people like me. They want one- stop shopping and we are a company they trust.

What comes after grid modernization? Then it will be about customer value.

We're used to being involved and engaged with a customer. We know there are many other things we can provide, services that will benefit the company and create a win-win with the customer.

David McHale, Retired, Chief Administrative Officer, Eversource: In some areas, the traditional rate-based investments and related growth model are nearing maturity. Other opportunities, somewhat less traditional, are now emerging.

Our experience in New England is a lot of very large billion-dollar reliability-based transmission projects have been successfully constructed. If they're not gone altogether, they're close. New projects are emerging, driven by public policy directives and the desire to meet renewables and clean energy standards.

Distribution, I think, probably everybody here could spend two or three times what they're spending, but there's a regulatory sort of gag reflex at some point. There will be some growth, but maybe it's just an optimization of what you get to spend, more from a budgeting standpoint.

There are areas we see increasing that will provide either a backfill or new revenue streams, and technology is one of them. That's OT, operational technology, and IT, information technology, for the benefit of the grid and the benefit of the customer. Over the last three years, Eversource IT investments were at their highest levels ever. Year after year, it's getting larger and larger.

It's not a thirty-year asset. It depreciates much more quickly,

but it's an opportunity the company's going to have to invest in as we modernize the grid and bring new capabilities to customers.

Also, many of us around the table are in deregulated markets. We're not in the generation business. We've had fits and starts in New England, state by state, about whether the utilities should be allowed to build renewable energy or peaking generation.

Massachusetts has just allowed for investment in solar. There's a new revenue stream, and it probably won't move the needle tremendously, but you'll see some of the utilities push in that direction as well.

It's early in the game, but there's also investment in electric vehicles and related charging infrastructure. We're seeing that working collaboratively in Connecticut and in Massachusetts. I'm not saying that we're partnering day and night with the Teslas of the world, but there is going to be a wave as we create more electrification of the economy. We're seeing California make a big push in this direction and I expect other states will find these strategies and investments beneficial.

From a planning standpoint, sometimes it's easy to get a little nervous about diminishing rate-base growth, but along with these emerging opportunities, the prospects are good. Now, whether they amount to an aspirational five-to seven-percent earnings growth and continue to support dividend growth, that remains to be seen. But there are prospects for those revenue streams going forward.

Mike Calviou, Senior Vice President, Regulation and Pricing, National Grid: It's clear that in a medium to long-term view, traditional rate-based growth will start to tail off.

But with all the required investment and all the new stuff, the smart technologies, the meters, grid modernization, if anything, there's a new sort of growth spurt going on. Going forward, our revenue streams have to be built on what customers value. I think some of that will be providing the platform that brings people together, the actual facilitator that provides market access and data insights. There will be a massive increasing of IT aspects to our role.

There will also be things where the utility is just the most efficient effective way of delivering a certain societal need. Yes, we're going to see lots of decentralized renewables and storage, but large-scale renewables and storage are probably also going to have to play a key role in terms of meeting the state's ambitions to decarbonize.

There's a lot of opportunity. Clearly there will be new services that we'll be performing for customers. Some of that might be behind the meter. Some of that may be blurring between what you might call traditional utility regulated roles and more competitive markets. We'll have to just get comfortable with the fact that the utility model will be more complex and less clearly defined than it's been in the past.

Jan Vrins, Navigant: Utilities are investing in making a more intelligent and smarter grid. What comes after grid modernization? Because then it will be about customer value, probably more specific to products and services that are relevant to customers. Electric vehicles, for example, are one of those products.

Stuart Nachmias, Vice President, Energy Policy and Regulatory Affairs, Con Edison: It's not only the technology piece. It's the clean energy part, which is really a transformation in the business.

As an example, in addition to the regular capital work we do, and the IT infrastructure, and the smart meters, we have an incentive program to encourage customers to bring distributed resources to locations that allow an alternative to traditional investment. These incentives are investments that can be capitalized. We are doing that today, capitalizing over ten years rather than thirty or forty-years.

If it works well and we're encouraging technologies to manage the grid effectively, it'll keep growing.

Energy efficiency was a pass-through business for years in New York. In our recent rate case, we're moving to a model where energy efficiency investments will also be capitalized. That is a sweet spot where we can contribute to clean energy goals and future system needs, while having a lower impact on customer bills, and also some incentive for the utility to get into that kind of business.

These are things in addition to the more traditional types of investments. Another growth area could be the development of

renewables through utilities. The state initially has said no to a significant utility role for large scale renewables development. But it's not a slam-the-door-shut kind of no.

We'll look at it again in a couple of years to evaluate progress toward the state's goals for fifty percent renewable energy consumption by 2030. If there is a place for a utility role in the evaluation, we will do that.

Utilities are also working with third parties delivering energy efficiency demand response programs. There's also the data that we're going to have that can support these programs. As a result, utilities will be in the center of meeting customer needs with third parties, using data to be successful.

The question is how utilities will generate revenue from the data as a way to allocate the costs of obtaining and managing that data. Like any other revenue issue for a regulated utility, the appropriate allocation of costs to those that gain the most value is important.

In this case, utilities will consider developing fees based on value to third parties, to customers that want more data services, or that want to use data to obtain more clean energy.

If the revenues are coming from other sources and leverage more private investment at the same time, we'll grow exponentially. Utilities will continue to prosper, while customers or third parties gain valued services. This will also mitigate cost impacts on regulated utility rates – specifically to non-participating customers.

NARUC just put together a rate design manual. It's important that they did that, but it doesn't tell you what to do. What it's really saying is, the whole framework for how utility services are priced is going to be changing. That's setting the stage to evolve in the coming years.

David McHale, Retired, Eversource: Something that may be underappreciated is that building a smarter grid has the potential to create operating efficiencies and cost savings. This occurs when you're taking costs out of the business through the introduction of technology and you're replacing a cost with an investment, which earns a return and generates earnings.

From a customer's and regulator's standpoint, they don't see the price per kilowatt-hour changing, which is great. In return, they get a smarter, more resilient electric grid.

We haven't talked about this, we probably won't today, but one of the powers of M&A is managing costs, cost reduction, and replacing those costs with capital, with a return. It's a very powerful combination for the industry and ultimately for customers.

Jorge Cardenas, PSE&G: Location is critical. If I look at the last nine years, your gas customers pay fifty-two percent less to heat the same house than they used to back then. Our electric combined with gas total bill, is twenty-six percent less than it was then.

Don't get nervous about diminishing rate-base growth; with emerging opportunities, prospects are good.

Ninety percent of our customers have both electric and gas service from PSE&G, and they pay twenty-six percent less in total energy bills than they did back then. That is headroom to allow us to do some of the things that otherwise would be incremental cost above the energy cost they used to pay.

How we create headroom is by finding ways to get cheaper gas for customers.

Kim Harriman, Senior Vice President, Public and Regulatory Affairs, New York Power Authority: That hits the nail on the head. NYPA is the last fully integrated utility in New York.

We have generation, transmission, and end-use customers. The Authority is an entity of the state that is a force for good, change, and enforcing energy policy. The important questions become: How do we look at our financial forecast given the changing state of the wholesale market structure? How do we look at the demands on the system and from our customers?

Efficiency is number one. We're partnering up with GE. We're going to look at actual visualization of our assets from generation to transmission down to usage. We will eventually have a more granular real-time awareness that's going to tell us how we can

operate our assets within a smaller margin. And also how to prioritize our investments or capital needs at some of our plants.

Second, we're going to identify revenue opportunities. This is not because we need to pay out ever increasing dividends. That's not what we do. Our dividend is all about our ability to drive public policy initiatives in New York.

When we examine revenue opportunities, we look at a couple of things: What is our efficiency? Our customer energy solutions business, how are we driving that? We put a hundred electric vehicle-charging stations in. We're going to put a lot more in.

We're accumulating data down to the sensor level on a piece of equipment in the customer's premises. How do we take that data and monetize it in a way that isn't restrictive to market growth and development? It's complementary, it's supportive to it, and it gives NYPA a revenue stream that allows us to continue to be an agent of change for the state.

Most importantly, all those things have to tie up with regulatory cooperation. We have to go to our regulators at the federal and the state level. We have to say these are the revenue opportunities that are out there for our customers, and maybe for distribution company customers or ESCO customers as well.

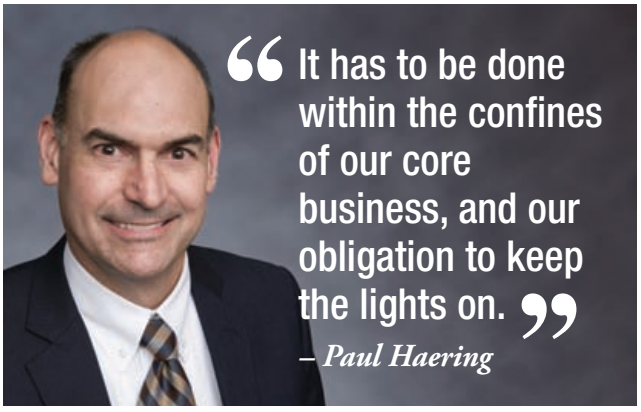
We have to say, what is the value? Are we going to have a reactive power market at the distribution level? How do we facilitate that?

We're going to look at each piece, both cost and revenue opportunity. And figure out how to push forward the agenda of the state to reach that fifty percent renewables by 2030 goal, or the carbon reduction goals in the state energy plan.

NYPA is playing a key role. We're implementing a new system from GE that's going to give us a better and more granular control of our asset base from one point all the way to the other point.

We are continuously looking for innovation both in technology and customer interaction. Then trying to take that innovation and marry that up to the revenue opportunities that exist, or that we need to create.

Jan Vrins, Navigant: Is it harder being combined or vertically-integrated, versus a non-integrated utility? How hard or easy is it to come up with new revenue streams, products and services?



Paul Haering, Vice President, Central Hudson Gas & Electric: It's a matter of working with policy makers to understand where those opportunities are.

In New York, there has been more of a prohibition for the utility to play in that space than an encouragement for the utility to play in that space. But again, maybe some of that is changing.

It's really more of an opportunity for a third party than it is for the utility. Whether it's storage, whether it's renewables. There may be ideas that are out there, but the question is whether the policymakers who are enacting the policy will allow the utilities to play in that space.

There have been signals. They are very modest in terms of whether there's a huge incentive there to allow utilities to play a more active role, and to get more revenue streams.

I look at it from a traditional standpoint. There's a tremendous amount of infrastructure needed to meet the Clean Energy Standard goals. As you put all these renewables on the system, some think transmission investment is kind of tapped out. In New York, that's not the case. There is going to be a tremendous amount of bulk and non-bulk transmission that we're going to integrate and make that generation deliverable.

There are issues within the NYISO tariff, that basically it's a minimum interconnect standard. Those resources, if they get built, will be curtailed a substantial amount of time without transmission investment, and ultimately that has to be addressed. We have to have those frank conversations about what it's going to take in order to enable policy.

Kim Harriman, New York Power Authority: We're not waiting for the regulator to tell us what we can and can't do. The REV demo projects, both National Grid's and Con Edison's, are examples of this.

I would recommend that we would say, "This is what we can do. This is what we want to do."

How do you find out what can we do? How can we drive a revenue platform that preserves the financial health of the grid? The utilities are the backbone of the grid. That's not going away.

There is a single purpose here, which is to preserve the financial health of the backbone of the grid, but also driving

innovation to effectuate the energy policy. How can you be proactive in putting forward revenue opportunities, to have capitalization for the benefit of the utility?

We have to start thinking like that, and being proactive in putting forward those proposals.

Paul Haering, Central Hudson Gas & Electric: We've done that in the past and ideas have been shot down. I look at things like Central Hudson's proposed community solar demonstration project. We were out in front on community distributed generation, and the Public Service Commission basically shut it down.

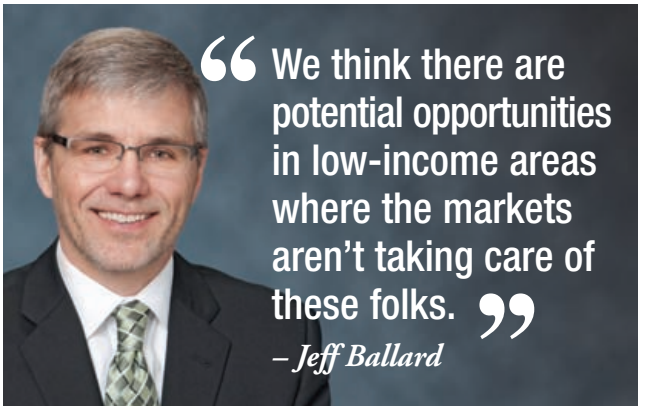
When we wanted to do a demonstration project around smart charging, the PSC staff shut it down. Again, you want to be proactive, you want to be out there and do things, and then you're getting a signal back from the policy makers that says, "Not interested."

Kim Harriman, New York Power Authority: We are not saying, "Thank you very much and don't come back." But instead, "This doesn't fit within our view right now in this time. So what else is out there?" I'm not saying that it won't be hard. You need to be as resilient on the business side.

Jeff Ballard, Vice President, Smart Grids, AVANGRID: All the utilities have some level of all-of-the-above strategy in terms of exploring revenue opportunities. Without straying from the traditional utility role too far, creating the necessary distribution system platform is a major investment that is going to take a five-to-ten-year journey to attain. So, it's not that we take care of this issue next week. It requires a real commitment and a material level of investment.

In order to be successful in the long run, you need to optimize your cost structure. We want to be the most efficient utility in the markets we operate in.

That builds us the headroom to make these investments, whether they are the traditional ones or the market enabling platforms that we talked about. We also believe in transmission, not just in our jurisdiction, but in other jurisdictions. There is a need to aggregate and transport energy from large scale renewables to the markets they serve in. We think there are opportunities there for growth.



In terms of leveraging the platform to help provide other value streams for third parties, for others and for us, we are actively assessing opportunities with demonstration projects. This, I think, is an area where demonstration is critical. Do things in small scale, adapt quickly and see which of the seeds we planted are appropriate to bring to scale.

We have three official demonstrations in New York that are active. We also recently filed a series of demonstration projects in our Connecticut utility jurisdiction and have a couple of pilots underway in Maine. This is not just a New York issue.

Notably, we also have an energy-smart community project underway in Ithaca, New York that is really a dozen demonstration projects. This project in particular allows us to accelerate advancing the underlying platform, which we can experiment on top of to develop and assess additional value streams for our customers and the market.

Lastly, when you look at customer-differentiated services, we think there are potential opportunities in low-income areas where the markets aren't taking care of these folks. We need to find a way to address the needs of these customers and provide them access to clean energy products and services.

PUF's Steve Mitnick: I'm just curious as to the practicality of what we call revenue streams. Maybe you all could give me some practical examples. Is there a percentage of customers paying some additional surcharge on their bill beyond basic service?

Stuart Nachmias, Con Edison: I'll give you two examples. They're both demonstration projects. The first one is what we call our virtual power plant. It leverages resiliency.

Customers that are either interested in installing solar on their rooftop, or have solar already, can subscribe. We're looking for three hundred customers to participate in this, and we will install a battery at their location.

They will pay a monthly subscription fee. The battery will be available to them on bad weather days. If we know a storm is coming, the battery will be available and will be connected. It will be able to power certain circuits in the home and recharge daily when the sun is out.

On a regular good weather day, Con Edison will manage all of those batteries as a collective resource. We can use that for supplying the grid or for demand response, in essence to take some power off the grid if we need to, in terms of managing peak demand. Lots of challenges working with the fire departments to get all the approvals to do it, but that's one.

The second example is the online marketplace, where we have some products and services available to customers. We're sending them energy reports and suggesting that they can look at a couple of products and services. One is solar. One is a thermostat.

If the customer clicks on it and asks for more information, because we're helping that entity make a sale, we get a fee. If, in the example of solar, the deal is closed, we get an additional fee. That generates additional revenue.

Hopefully we can identify particular locations where that would make sense with this hosting capacity, so we can encourage and enable the clean energy solutions. And do it in a way where it's not going to add costs.

It allows us to try to work with the solar companies, and lead generation. The biggest cost is always customer acquisition, so to the extent the utility can help, those companies are willing to pay a fee.

Jorge Cardenas, PSE&G: I'll push back a little bit on that individual customer being the one who pays. We truly believe in universal access. Solar, for instance. We installed one hundred forty thousand solar panels that feed right into the immediate secondary grid.

Many are in the middle of cities, where people would not even have a roof to put solar panels on. That universal access is there for all to have access to green energy. That is socialized and paid for by all customers, and there's a benefit to all.

Whether it is energy efficiency systems or solar, there is a way to create a win-win for customers and the utility. We've invested about four hundred million dollars on energy efficiency, and about eight hundred million dollars on the solar on the brownfields and pole top.

There's a mix. There's going to be a mix of the individual, or the neighborhood that aggregates and does it. There are going to be multiple ways to get those revenues in, not just one.

David McHale, Retired, Eversource: It's a little narrow perhaps, and maybe it's more around storm resiliency, but there's interest in the microgrid space, to building out microgrids in a number of communities.

That's driven largely by municipality interest, subsidized by state policy and the like. Eversource is working with Massachusetts and Connecticut (less so in New Hampshire), where there is a high level of interest and the possibility of a revenue stream back to the utility.

Now there's a question of how you price that service and what value is being created. The microgrid space is something that's emerging in the business and worth watching.

Jan Vrins, Navigant: As we see new distributed energy resource platforms, and new process services, how is your utility addressing this from an organizational perspective? How do you engage your customers differently? How do you organize yourself differently internally?

Kim Harriman, New York Power Authority: When NYPA created the New York Energy Manager, we formed it as almost a separate division within NYPA. We named it a digital energy source. It has its own business unit. It's separate and apart from operations or commercial operations or physical operations.

Again, it's walled off to be that independent system platform, where it's getting data in. It's informing the rest of the business units around the company. But it is largely driving that platform, that neutral playing field of data collection, and then marrying up with these third parties for data usage.

NYPA believed that it was important to support this business function. And make it independent as an entity to ensure we were driving the right signals to bring more customers on, and see what we could do with that information.

Again, we're not down to the distribution level. We're not as worried about that success of data acquisition, and changing patterns of behavior that could somehow affect the other side of the house, which is distribution investment. Whether it's non-wires, alternatives, or it's a substation.

There is a tension between that and how our plants are operating. If I'm driving efficiency at the customer level, or if I'm partnering up with customers, they are buying less from the grid. If they're buying less from the grid, I have plants that are

operating and putting power into the grid.

We needed to sectionalize New York Energy Manager, and focus and drive that business model without having any kind of influence. Not that there would be. But we just wanted to separate it.

Jan Vrins, Navigant: Could you potentially do it with your electric vehicle charging station infrastructure? Create that as a different business model?

Kim Harriman, New York Power Authority: We're working with public governmental customers to put in electric vehicle charging stations. The unknown for the charging station is, what is peak impact?

And the question has always been, what do you do with the revenue opportunity from the charging station? If the municipality owns that charging station, but we facilitated it through our technical and our financing measures, who owns it? Who's setting the rates? Who's not setting the rates? How is that impacting the customer?

Jorge Cardenas, PSE&G: We've created a group called Customer Energy Solutions. Solar, energy efficiency, smart cities, storage, and so on. We're working with our Board of Public Utilities and the Department of Energy to install several electric vehicle charging stations.

Microgrids. We have Hoboken and some others like NJ Transit interested in the concept. We've collaborated with studies with the Sandia National Labs, for Hoboken.

Fuel cells are coming. They've been coming for twenty years. It's closer than twenty years now. We have a good number already being installed in national chain stores. We have a number of large customers that have fuel cells already, so we're working with them as a specialty product since they are fueled by natural gas.

We've been hiring experts, making connections with the organizations that are in those specific industries.

The experts on how to tie it to the grid and plan it are in our asset management group. The expertise to use it as a solution for our customer is in the Customer Energy Solutions group. The networking that takes place is in that group.

We just make sure that when it's tied in, it's going to work. We need to know how it behaves all the time to ensure it benefits the stability and reliability of the grid and does not detract from it.

Mike Calviou, National Grid: We've done a couple of things at the global corporate level in the U.K. and U.S. businesses. We just recently formed a third entity, a third pillar of our business, which is going to bring together all of our non-core regulated activity around new infrastructure.

This will include distributed generation, such as solar. Because we see that's a big part of the future. It will bring some existing un-regulated activity together with these exciting new growth areas, with a real emphasis in particular on the activity outside the traditional core utility space.

However, within our core U.S. regulated activity, we also formed a New Energy Solutions team. That's effectively combining all of the new activity that is required to meet our customer's needs in New York, for example under NY REV. And in Massachusetts, for example under the Grid Modernization proposals, and the equivalent proceedings in Rhode Island. The focus is coming up with these new ways of meeting what the customer needs as the energy landscape changes.

We're also a founding investor alongside Southern Company and Xcel Energy in Energy Impact Partners. This is a venture collaborative strategic investment fund targeting emerging technology companies optimizing energy consumption and sustainable energy generation.

The key is that we are not only investing in new energy technology, but working closely with innovators. They can share the insights that inform our business. We can share our insights with entrepreneurs to help them evaluate new technologies and help accelerate their commercialization.

There's a lot of change going on. It feels like a massive cultural change is required in utilities. Really changing how utilities think about things. For example, we are re-engineering all our processes with a real customer focus, because that's what you need as the world is changing.

We also need to get utility employees out of a rate-based mind set. We need to identify and implement the right incentives and the right structures, so that we're finding the solutions that

customers need, so we can become much more agile and able to adapt to the changing future.

Stuart Nachmias, Con Edison: We have a little bit different approach. We have a group that's focused on how our business is changing, and on demonstration projects.

We put that group within our electric distribution organization. That organization is going to be considering non-wires alternatives, different solutions.

It was important culturally that it wasn't thought that we had a group that was continuing business as it was, and there's this other group that's going to work on something new, and not have that be integrated. We integrated it within. There are folks that are working on how the business is going to change within that group.

Then they work very closely with our existing customer operations folks. When we have a new demonstration project with the online marketplace, we tie in with our existing operations folks because the customers are calling the same call center.

They may get a specialist, or someone who's specially trained for that program, but it's all integrated. In fact, our customer operations group is working on a digital customer experience. A total revamp of how we digitally interact with our customers. We're integrating a lot of these new programs into that process.

We think it will get us to a really good place where there's a full integration and evolution of our existing business into a future business.

Jeff Ballard, AVANGRID: My group, which we call Smart Grids, is essentially responsible for facilitating development of the roadmap. We facilitate the planning process, but we work with the functional business areas such as customer services, planning, operations, and others to make sure it's our company roadmap, not just my functional area's roadmap.

We also orchestrate the innovation and demonstration activities. I have a core team and that's what they do, but much of the execution and delivery is performed by members of the various business areas, who at the end of the day are the subject matter experts and the ones who will own the solution if we move to scale.

We made sure that the ownership stays within the business. They need to own it, and they need to integrate it in their day-to-day.

Paul Haering, Central Hudson Gas & Electric: We have a very similar approach. It's effectively a separate organization within the business called the Energy Transformation Group. It's totally a re-think of the space, so it's open concept. A lot of allowance for dialogue.

We've actually brought in a lot of third parties. We've brought in new hires and staff that think differently than what the traditional utility planners and utility folk are thinking.

Again, the work that's going on has to couple with what's going on from the distribution planning perspective. And what's going on from an operation perspective. It's tied in to what's going on in the call center to make sure that everyone is on the same page and the message is being delivered consistently.

Again, we're changing. We have to change. I think we tried to create an effective model. Ultimately, it has to be done within the confines of what our obligation is, and what our core business is, which is to keep the lights on.

We are re-engineering with a real customer focus; that's what you need as the world is changing.

David McHale, Retired, Eversource: We haven't invented new organizations so much as engaging in more collaborative project management, more collaborative service delivery.

On this whole concept of customer expectations, and creating more digital content, we've required accountability across the organization. Bringing together the chief operating officer, the chief strategist, and communications. I was running Customer Care and Technology at the time.

The team is accountable to the organization and the customer. Not only within the organization, but at the board level as well. We're creating boardroom level conversations around this topic and highlighting its strategic importance.

It's incredibly important because the employees are watching to see how serious you really are. I gave a presentation to our board earlier this year on the evolving electric customer. We would never have had a conversation like that two or five or ten years ago.

Then we played pieces of the presentation back to our employees, so that they know that this isn't just some kind of six-month project. No, this is our business now, and we're accountable for it. I'm not saying it's built into our incentive matrix at this point.

The real change is, ask your clients, are you having these conversations in front of your boards? If they are, you know that you're getting real cultural change. PUF