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Business Models and Regulation of Regulated Utilities- Do They Need to Change, and If So How?

Good afternoon, I'm Ralph Izzo – Chairman and CEO of PSEG, headquartered here in Newark, NJ. I'm honored to have been invited by DOE to share my perspective on the regulated utility model with my fellow esteemed panelists.

Do utilities and how we are regulated need to change? The answer: of course. All industries and how they are regulated need to constantly evolve to keep up with changing technologies and changing societal needs and consumer preferences. As utilities, we are certainly seeing changes in all of those areas.

There would be those who would predict --rather colorfully --that the utility model –with 3,200 utilities selling $400 billion worth of electricity a year, mostly derived from burning fossil fuels in centralized stations and distributed over 2.7 million miles of power lines-- is doomed to obsolescence. They say that it's a model that hasn't changed since Thomas Edison invented the light bulb. And it's in a death spiral.

While there's certainly some truth to the fact that the model hasn't changed all that much in the past 100 years, and I too feel that the utility model must evolve. I must add as they say "rumors of our demise are greatly overstated."

The grid has become much more efficient in the past decades as competition has improved the performance and lowered the cost of generation units; natural gas finds beyond anyone's imagination a decade ago have brought billions of savings to customers; emissions of SO2 and NOx have been slashed and we are on a path to continue to reduce CO2 emissions; and basic reliability continues to be at increasingly higher levels.

That said, I strongly believe that the grid needs to become more dynamic. The utility model needs to evolve in the face of changing technologies and new energy choices like solar and wind, electric vehicles, micro grids and a range of consumer devices that can manage energy use to consider as we consider how we supply energy to our customers.

I know that utilities must evolve as society grows increasingly conscious of the fact that we need to regulate carbon emissions in light of climate change. And we—and our regulators--must evolve as consumers and businesses grow increasingly dependent on reliable electricity while climate change is clearly producing more volatile weather.

Where I depart from the industry naysayers is that I believe the utility model can-- and must evolve with new thinking and evolving regulation. I don't think anyone should dismiss what many consider the greatest engineering accomplishment of all time--- "Electrifying the nation and providing universal and affordable access to power for all citizens"----without working to meld the best of what we have today with new technologies and new thinking to create the "Utility of the Future." And let me emphasize that as a society we decided long ago that electricity, and the economic and social benefits that come with it, should be available to every citizen. The utility model -- even acknowledging that the model must evolve -- is the best way to accomplish that goal.

Embracing Energy Efficiency

I have a passion. My passion is energy efficiency. Seems like a crazy passion for the Chairman of an energy company, doesn't it? What CEO wants to sell less of their product?

It's a major issue. The U.S. ranks 13th out of the 16 largest economies in energy efficiency, according to a report from the American Council for an Energy-Efficient Economy, an environmental nonprofit advocacy group.

We need a much more robust discussion about energy efficiency. Energy efficiency is the area I would like to see utilities more involved in. The utility is the most efficient means to provide universal access to the benefits of energy efficiency. Some of the solutions are as low tech as putting caulk around windows. And some are more sophisticated such as upgrading a hospital's energy systems. We're doing both at PSE&G.

I believe that energy efficiency meets many of the needs that society and consumers have identified---less emissions, cleaner air, and lower costs. And I believe that the utility can do the best job of bringing energy efficiency universally to a community and a state and the nation. I would like to see the utilities regulated in such a way that they are encouraged to invest in energy efficiency.

Shifting the Focus from Rates to Bills

Instead of growing electric sales, utilities should focus on providing the least-expensive-as-possible electricity to people using the minimum amount of electricity they need to use in order to live the lifestyle they want to live. Energy efficiency creates a dynamic where even if rates go up, bills go down.

I believe this dynamic – shifting the focus from rates to bills – could be very productive – indeed, critical to unleashing the full power of energy efficiency. Utilities would be a very

effective vehicle for investing in greater energy efficiency because the utility's hurdle rates – the minimum acceptable rate of return on investment – is far lower than the customer's.

The returns expected by consumers before they will invest in energy efficiency are far higher than the returns that we would accept in our business. People would rather not reach for that better light bulb on the shelf of the hardware store despite the real payback in savings. They'd rather spend the extra $1.50 that bulb costs on a soda. Imperfections in the marketplace impede the ability to get wide-scale deployment of energy efficiency.

In lieu of the consumer (but ultimately on behalf of the consumer), utility investment can go a long way toward expanding access to the benefits of energy efficiency.

Putting in Place the Right Incentives

The wins for the environment and consumer are obvious, but regulators and policymakers need to focus on making this a win for the investor, too (in this case, the utility). That means being willing to talk about lost revenue. You want to create a situation where the cost reduction achieved through energy efficiency exceeds our lost revenue, so that we can make up for some of the lost revenue streams we would have realized through the use of our wires. You need to incent utilities to want to reduce energy consumption.

If the customer uses 10% less electricity, their bill has to go down by something less than 10%, and that financial savings needs to be shared with the utility. Regulators should enable utilities to invest in behind-the-meter assets and reward them for doing so. Utilities should not only be indifferent to investing in smart thermostats, more efficient lighting systems, higher-efficiency boilers and air conditioners, but be as motivated to do that as we would to build a substation.

Working with Others to Seize Energy Efficiency Opportunities

Energy efficiency is a huge opportunity for utilities to partner with market entrants. The pact that I wish to make with the technology community and the entrepreneurial community … is that I would want to be their most effective sales channel. I would like to be their market maker. Because at the end of the day, not only do I not manufacture the components of my nuclear plant, but I have no expectations of manufacturing the light bulbs or the smart technologies or developing computer applications to manage the home. I am a service provider.

New devices, such as Nest's popular thermostat and many products from Honeywell that are making consumers rethink what to expect from the companies and gadgets and that help them manage their energy usage, could achieve much wider deployment via utilities.

Similarly, utilities could partner with companies like Tesla and Chevy Volt to help the environment. IN NJ, it's transportation that's responsible for the most emissions. Currently, PSE&G is sponsoring an electric charger trial with multiple companies in NJ to better understand what incents a user to get an electric vehicle. We've completed a one year trial in our own facilities.

Despite some early adopters, most consumers aren't terribly interested in investing or exploring in energy efficient options. New entrants in the energy efficiency market can go it alone, but they will find their path eased if they lean on the utility's trusted, credible and familiar brand.

If the utility – which already has a strong relationship with the customer -- can show the customer the energy savings they might see and offer them solutions to achieve those savings, they will likely have a greater degree of confidence than someone knocking on the door and saying, 'Boy, do I have a deal for you!' The customers know that we're not going to be gone tomorrow, we've been here for over a century and we'll make our assessments based on good technical work and we'll offer them something we can stand by.

I believe the utility is best able to facilitate a competitive market for clean energy solutions where Google, OPower and others can provide more options for customers and provide solutions ourselves where the market is not providing them and we are best able to leverage our strengths. And the utility is best able to ensure universal access to traditional and non-traditional energy services. Renewable energy and energy efficiency should not only be available to the wealthy. And assuring that lower income households have energy efficient solutions will better help the environment.

Making Solar Work…in a Way that's Economic, Fair and Democratic

Take solar. U.S. homes and businesses had enough solar panels at the end of the second quarter to produce 5.1 gigawatts of electricity, up 46 percent from a year earlier. Companies including Google and Apple are developing solar farms to power their data centers. Verizon is spending $100 million on solar panels and fuel cells for offices and call centers. And that's great. But the users are predominantly above the median income in the U.S. or big businesses. And they all have been heavily subsidized. And even with the subsidies, the market share is still only around 2%.

In NJ, only 0.5% of New Jersey households have put heavily subsidized solar on their roofs…no distributed solar system has been installed that is cost competitive without large subsidies, and only a handful of people, have actually disconnected from the grid. And to be truly cost-competitive with energy supply – installed solar costs in New Jersey would still need to fall by more than two thirds of where they are now. We support solar, we just need to be transparent about the policy choices we are making to subsidize it.

But it's clear that new technologies like solar have a role to play in providing energy choices. I believe that the utility can help make solar work in an economical fashion -- and in the most democratic and universal manner.

We have made about $750 million in utility solar investments in NJ over the past 5 years and also have solar facilities in 6 other states – AZ, CA, DE, FL, OH, and VT. Centralized solar has many advantages over rooftop solar, according to industry pundits. "The centralized concept — this big power plant of solar — seems to be winning out over these rooftop ones, which are, on an apples-to-apples basis, probably 40% more costly according a recent industry report."

The latest round of our solar investments in NJ involves roughly $450 million to help finance or develop directly 142 MWs of clean solar power, on top of the 160 MWs of clean solar power from earlier rounds of the program. Our efforts in NJ are focused on developing solar on landfills and other underutilized space – turning brownfields green.

Renewables come with costs as well as benefits – so it's important that they continue to be developed in ways that are affordable in the short term but help secure our energy future over the longer term.

And it's important to recognize the value that the grid continues to provide to those parties with Solar – ensuring that costs are fairly allocated across the customer base that uses the grid. And those customers who can't afford to pay for solar are not paying for the solar installation or grid charges of customers that have installed solar.

Conclusion

There is an important role for many different kinds of companies in integrating new technologies and services, but it would be shortsighted to dismiss the key role that utilities can play in building a more efficient, resilient and sustainable energy future. With the appropriate incentives, utilities could be onboarding all sorts of energy efficiency improvements that are now being held up at the gate -- frankly, because of an outdated business model.

Reliability remains fundamental to the mission of the utility... But, equally important, is universal access. The grid will remain indispensable. How many people are really willing to stay off the grid? I dare say, not many. And, from society's standpoint, it's impossible to ignore the overwhelming economic benefits of having many people band together and participate in a network that is the best deal for the small consumer. This is a societal equity issue that is impossible to ignore. The grid is a great equalizer, promoting not only economic prosperity but the continued health of our society and democracy.

Our customers depend on electricity more than ever. Our challenge is to become even more responsive to their needs, while doing so at a reasonable cost and with less impact on the environment.

Thank you for the opportunity to speak today.