

The Great Transformers: Jon Wellinghoff Transcription

Peter Shaw: Hello. This is Peter Shaw. I am managing director with Utilipoint International

My guest today is chairman Jon Wellinghoff, Chairman of the Federal Energy Regulatory Commission. Chairman Wellinghoff was appointed as commissioner to the FERC in 2006 and was appointed to become chairman by President Barrack Obama in 2009.

P.S.: Chairman, over the next 10 years clearly there will be several changes affecting the industry so when you look out, let's say, to the year 2020 what does the electric utility industry look like, in your mind's eye?

J.W.: Well I think it's going to look much different than it does today. I think there'll be much more competition. I think the utility industry itself will be transformed. I think you'll actually have an unbundling of services. The true monopolies services, distribution will probably stay a monopoly, but from there most of it will be competitive and you'll have many other people in this space so you won't even have the same concept as you have (of a)... utility today. We are starting to see that in some states that have done unbundling and restructuring, but it hasn't spread yet across the country entirely. But to the extent we have that; it will allow consumers more choices. They will have more opportunity also to participate in the utility markets. They will actually be participating in those markets by bidding in demand response, bidding in energy efficiency, modifying their loads and they'll have competitive service providers helping them do that, by modifying their loads in ways that will make the system more efficient, make it operate better, lower their costs and ultimately allow us to do things like integrate in plug-in hybrid electric vehicles, electric vehicles, integrate in more renewable resources that have a variable component to their load factors such as wind and solar. All of that is going to become more possible because we are going to have more competition. We are going to have more actors in the market and we will have consumers participating more, with more communication to the utility systems.

P.S.: That is a very dynamic and fascinating vision for the industry. Clearly there are some challenges that the industry will have to overcome in order to achieve that vision. What do you see as some of the bigger challenges that the industry, in collaboration with government policy makers, need to overcome to achieve the vision?

J.W.: Well, one, of course, is the institution of technology like the smart grid. That's going to be a major challenge. There is a tremendous amount of legacy systems, of older transmission and distribution infrastructure that needs to be changed out. And again that's where, I think, competition will come into play, where ...competitive providers come in and provide those new technologies not in the system that will bring more capital into the system, new jobs, but it will be a challenge.

On the regulatory side we're going to have the challenge of insuring we have full, fair, open, competitive markets that are fully overseen and regulated. These markets even though they will

be restructured, they won't be de-regulated, will still be regulated markets. They will have to have both state and federal regulation to oversee and ensure that consumers are treated fairly and to ensure that the competition is open and transparent so that's going to be a challenge on the government side.

P.S.: So when you look at the role the FERC plays today and the role state regulators play today do you see some shifting in terms of the roles of those two levels of oversight or play over say the next ten years in helping to bring about the changes that you've outline?

J.W.: I do see some shifting. FERC has been very involved in aggressively moving forward in organizing wholesale markets and insuring that customers can participate in those markets both in New England and Mid Atlantic areas. We've had customers able to bid in demand response and bid in energy efficiency in those markets, and so FERC has played a very instrumental role expanding those markets.

We have worked with the states in that regard and the states will have to be more sensitive to competitive nuances of the new markets. And many states are not used to these competitive rules they've been traditionally regulating under an investor owned integrated model, vertically integrated model. I think those models are going to have change because we will see much more competition and so with that state regulators are going to have to change more to the type of the oversight role at the retail level that FERC now has at the wholesale level.

P.S.: So when we talk about shifts in the regulatory paradigm that state regulators are accustomed to sometimes the term business model is used in that regard. Do you see some ideas or constructs emerging around how the regulatory construct might adjust to that new reality?

J.W.: Well, I do. Again I think they are going have to look at a more of a consumer protection market oversight model than an economic cost regulation model that they have now. Much as the FTC, Federal Trade Commission does now with respect to consumer oversight. Much as FERC does in the wholesale markets. Again, I think, state regulators are going to have to look at that from the prospective of who is entering into the market at a retail level, are they appropriate entities to participate in that market. There will be registration process for those new retail competitive providers and those registration processes will have to be overseen by state regulators. So it, again, is a different kind of regulatory model for them, but its one that in other instances states performed and certainly perform in the telecommunications area and in other areas.

P.S What you are talking about requires the involvement of energy using consumers. They have to ultimately understand the value, understand the value of participating in the supply chain. If they are going to relinquish some control over their usage and their demand, they will need to understand the benefits of that and appraise the risks and how to participate in that process. Where do you see the role of government in helping to educate the public in the value about the value of things like dynamic pricing and demand response offerings can bring versus the role of industry in helping to educate consumers and bring them on board?

J.W.: First I'd suggest that consumers are not going to be relinquishing control, they actually going to have increased control. They will then be deciding who to allow to acquire that control for the consumers benefit. In other words, either on their own behalf or for their benefit through third party aggregators allows their usage patterns to be controlled in ways that make the system to be more efficient and also lower their bills.

But the government role in that, to answer your question, right now FERC, for example, has now been charged in doing a nationwide demand response plan, an action plan, we are working on that right now, to determine communications components. How we can better communicate to consumers to let those consumers understand and know better that if they are able to install devices and are able to work with third parties that they can better control their bills, by allowing their various uses to be controlled. Maybe to give you some examples would be the best thing to do, take a plug-in hybrid electric vehicle, that is really on the edge of coming in the market next year. We will have them in the market. GM has said they will have them in the market. Nissan has said they will have them in the market.

These vehicles, I actually call them cash-back cars, can be plugged in by consumers and through either the consumers or probably primarily through aggregators used to stabilize the grid. Selling back to the grid regulation services so those consumers will ultimately control those loads in ways that will allow them to charge the car and use the car as everyday transportation on one hand, but on the other hand to also use those vehicles to be a grid support appliance, in essence, to get money back. Now how are we going to inform consumers of that? Well, I think, they will be primarily informed through the companies that manufacture and sell those cars, but I think there is a role for the government to play in informing consumers how they best take advantage of that. And there is also a role for government to play, a very important role for the government to play, such as FERC to ensure that the regulatory tariffs and structures are in place to ensure that consumers can in fact participate in that way.

And that's what we have done in the wholesale markets with the RTOs and ISOs. We have ensured to put into those RTOs and ISOs the tariff structures that will allow consumers to provide these kinds of services, either energy efficiency or demand response services back into those markets. That's the primary role that the government will have to play to ensure regulatory structures are in place to allow consumers to participate.

P.S.: So in regards to provisioning those services to and using customers, industrial, commercial and right down on to people in their homes, what do you see the role of the currently integrated regulated utility to be versus the perhaps third party providers, as you said retail energy providers, that are aggregating customers or providing services behind the meter regardless of who the utility might be?

J.W.: Well, I think, they both will be providing those services initially. I think you'll have traditional vertically integrated utilities; they'll be providing aggregation services as part of their load-serving entity function to retail customers, but I think at the same time you will have, and in fact we do have now, third party aggregators that are not utilities, not integrated utilities that are providing those services. For example commercial industrial customers in the northeast and Mid-Atlantic and other areas where we have demand response able to be bid into wholesale

markets and they're helping those customers aggregate those services at the retail level and bid them up to the wholesale market so I think that will continue on and filter down all the way to the residential level, especially with services like those that can be provided from plug-in hybrid electric vehicles. I think you will also find services provided from things like refrigerators and washing machines and other traditional consumer appliances again to be aggregated by both, either by third party aggregator or by a load serving entity that maybe a vertically integrated utility.

But, I think, vertically integrated utilities are going to start to understand soon that their business model needs to change again, and that changing that model will be one where they will disaggregate. And they will have a generation company and a distribution company, and the distribution company will be a monopoly but the generation company will be a market based wholesale provider. And they will have these aggregation services on the other side of the meter for the customer to help the customer do things that again will stabilize bills and ensure that rates will be reasonable.

P.S.: What would be your advice to the chairman of the board of a large integrated utility company as to what they would want to do in say the next two years to put begin to put into place the kind of infrastructure and regulatory construct that allows them to navigate down that business model shift?

J.W.: I would recommend they do an analysis of their resources to determine where their strengths are. And based upon those strengths look at starting over a three to five year period moving their company, their primary core business into those strengths. If their primary strength is transmission then perhaps they want to be a competitive transmission provider. We are seeing many companies becoming independent transmission developers aside from vertically integrated utilities. (If) their strengths in generation maybe they want to migrate their business to a wholesale market based generation company. If they think their strengths are in a monopoly distribution entity and they have lots of distribution territory then they want to probably look at migrating their company to that model and then looking at how they can work with their regulators to ensure they can adequately recover from their fixed costs that they can invest in those distribution areas. If they have a very robust area and resource strengths in the area providing consumers energy efficiency, demand response and things on other side of the meter then that's where they might want to focus their company. But I think ultimately they want to focus their company on where they think they make the best returns for their shareholders and spinning off the rest of the proportions in ways that can benefit other companies that are not currently strengths for that particular company .

P.S.: There is a tremendous amount of collaboration and discussion required among various players in the market to put into place the amount of changes that will enable this vision to take hold. Where do you see the most fruitful venues for that kind of discussion between state regulators, federal policy makers, utility executives, third party investment companies that can create some consensus and create conditions for the state regulators to embrace some of the business model changes that are required?

J.W.: Well I think a lot of the conferences we have around the country are useful in that regard. the National Association of Regulatory Utility Commissioners (NARUC) is always a good venue to sit down with the various committees there and discuss these issues...we have some collaborative (venues) between the state and federal regulators, for example we have one for the smart grid, one on demand response .With respect to ... bringing ...utilities, the vertically integrated utilities, and some of the other competitive providers say in the generation area and transmission area, there are a number of venues around the country that I participate in and especially the ones that are sponsored by EEI, Edison Electric Institute and Emory the research arm of EEI. Those have been very fruitful in discussing these issues and discussing how companies can look at their strengths and sort of move toward their strengths in a more competitive market.

P.S.: One of the areas that's touted, often times, as to why its important for public financing to invest in the clean tech sector, for example the smart grid, is economic development, creating new economies and new jobs around the green tech sector. Where do you see the United States now in terms of global competition in competing with some of the other countries that are investing in this area and its ability to be competitive ten, twenty years down the line?

J.W.: Well, I think, we have some areas where we are definitely leading and some areas where we are lagging I think we are leading on the distribution side and the customer side, with respect to things like energy efficiency and demand response, looking at the smart meters, although Europe is doing a lot of very advance things in the smart meters as well, however, I think we still have a lead there. And I see new technologies coming into my office almost monthly really that are very encouraging. (This)will allow consumers to much better control their lodes and participate in the markets. (T)hat interface between the consumers and participation in the markets is something I think again we are leading in.

We are doing a lot of research and development and ultimately some deployment in the area of the plug in hybrid vehicles that I talked about. There is a lot of work being done at the University of Delaware, there is a lot of work being done on the west coast, Southern California and some others, and I think we are well ahead in using consumer side resources to stabilize the grid and help the grid become more efficientand we need to maintain that lead in the world and we need to be able to export that technology, that clean technology.

Where we are lagging is the bulk transmission system. You see China and even what South Korea (are) doing, countries that don't have 70 year old legacy systems ...building from the ground up in the last 15, 20 years and so as a result they have put in some very advance technologies. China, for example, is putting in a 1000 KBA DC lines in much of its grid. Our largest system right now is 765 KBA and the higher voltage you get the lower the line losses. South Korea over the last 20, 30 years has been bale to reduce their losses by over about 40 % .

We have a long way to go there. We can learn from those countries, but we need to catch up. We need to revitalize our bulk transmissions systems, so we can start to move energy across this country in a way it can make it more competitive. We can integrate in much more of our renewable resources, much more that are economically developable in remote locations like throughout the Midwest where we have wind, and the Southwest where we have substantial solar

resources, hydrokinetic resources throughout the country including the Southeast part of the United States. All of that potential can not be realized until we really update that transmission system and again that is an area we need to move in on very rapidly

P.S.: There clearly is a wave of investment in smart grid right now, some of it is publicly financed, a lot of it is being financed through the rate making process. There are those who argue that the smart grid is too expensive and may not deliver the benefits, especially to consumers that it's promised to deliver, especially when the economy is in a downturn and people are having a hard time. What do you say to the smart grid skeptics out there to encourage them to stay the course?

J.W.: The data I've seen, the data in fact that FERC has developed, I think is demonstrating clearly that the potential (of) the smart grid is even beyond our expectations. We did an analysis of potential for demand response in the country and determined that there are as much as 188 gigawatts of demand response ... achievable in this country, but it was premised on being achievable (by) putting in a smart grid infrastructure. So that infrastructure, if put into place, could realize that kind of reduction in demand by 188 gigawatts. You are talking about hundreds of billions of dollars of savings overall by reducing the need for combustion **peakers**, by reducing the need for other generating resources, and at the same time reducing congestion overall and allowing cheaper lower cost energy to flow in places it can't flow now because of that congestion. So if you add up all those savings, that doesn't account for the savings you get in smart grid from the need to not do onsite meter reading, for the ability to have outage detection, for the ability to have other utility benefits and savings to the utilities themselves, we are just talking about the overall benefits for the consumer from the reduction in lodes and reductions in congestions.