Update on DER, Grid & Electricity Sector Developments

Greetings,

Welcome to another issue of Update.

I received a lot of comments from you all recently. First was my Op Ed in the last issue of Update, The Other Clean Ones, where I talked about nuclear and hydro. Not all of you agreed with my premise that they are clean, and your arguments were very interesting.

Second was the large number of comments on my Blog Post about the U.S. exiting the Paris Accord. Most of you in agreement, but not all, again with some interesting arguments from the latter camp.

In the way that I present you this newsletter you don't have an opportunity to share your thoughts with each other. I do post my Op Eds on LinkedIn and you can comment there, but I am looking at other ways you might do that.

Take care,

Dan

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The End of the Grid

No....this is not a doom and

gloom piece. I am not about to talk about the grid running its course and not being around anymore. That would be silly.

I should have added the following to my headline "- Where exactly will the end of it be in the future?"

I have often recounted the tale of how competitive metering became a success in the U.S. Haven't heard that one? That is because the attempt to do it was not a success. It was a failure. In the late 80's and early 90's Enron, fresh off its success in introducing retail choice into a number of states, decided to push a little further and make metering a competitive business as well, i.e. the utility would not be the only entity that could own and operate the meter on your home or business. Laws were passed in Texas and New York State allowing this.

Like some of its other ventures, Enron apparently did not run the numbers or hone the business plan because they did

not see that installing a meter in one neighborhood in the morning and then in another neighborhood in the afternoon across town made the costs soar compared to an all-homes deployment plan. They did not really see the problem with having to read those meters that were scattered here and there. In fact, a competitive metering approach is said to have made the cost for one installed meter be 10 times the amount of one deployed in a "swat" approach.

All of this was happening at the same time that advanced meters (AKA smart) were being made available. But what utility would pursue a change-out of their old meters if they were not sure they were going to be in the metering business going forward? The result was a chill on smart meter deployment and a delay of years in getting them on their way into the grid. Thankfully, the laws in Texas and NY were repealed and we all know what happened to Enron.

So if competitive metering had stuck, would the end of the grid not have been

the meter, as it had always been considered to be? Would it have been further up the utility line?

The term grid itself has always been a bit problematic. Taken literally, it seems to refer to just the wires, and since wires remain the purview of utilities that means that the grid is the utility system.

But is it, or should it be, only the wires? Are generators part of the grid? Should grid be used as a term to refer to the whole electricity system? I say yes to both, I think that grid should mean it all.

For example, when we talk about ISOs as the grid manager, we are not just talking about the wires. We are talking about the dispatch and management of what goes into and over the wires, as well as the wires themselves.

Now let's jump to NY, where one of core elements of REV is to have Distribution System Platforms, where Distributed Energy Resources (DER) will "plug-and-play into something akin

to the ISO control center. But yet it will be local and only on the distribution system and below.

With the future expected to be a distributed one, dominated by DERs, the DERs are expected to be an integral, dynamic part of grid operations, and components that will be counted on as such. So are DERs part of the grid?

What about EV charging stations? The Missouri Commission recently denied a proposal by Kansas Power & Light to deploy charging stations in its service territory. The utility's proposal included being able to cover the costs of such in the utility's rate base, meaning it would be part of the utilities infrastructure. The Commission said it did not have jurisdiction over EV charging stations.

One more example to chew on - is a microgrid a grid component? Or is it a DER? Is what happens behind the meter on that microgrid not part of the grid?

If you have stayed with me to this point

in my column, your brain may be suffering from a semantics-induced headache. But as a person who has long specialized in communications and positioning, especially when it comes to policy, I think semantics are important, especially when an industry is being transformed as much as ours is. And semantics are always important when it comes to policy, especially in the tax area, or in what I feel will be an inevitable examination and modification of the Federal Power Act.

When it comes down to it, I am not sure where the end of the grid should be. I don't know if we need to know but it is something to think about. What do you think?

In that vein, I received a lot of comments on a recent blog post that I did. With the platform that I use to deliver you this newsletter I don't currently have the ability to let you share your thoughts with each other right here and right now. But I do post my Op Eds on LinkedIn where you and other people can weigh in with your insights, questions and criticisms.

Meanwhile I will look for other ways for you to express your thoughts.

Thanks as always for reading!

Dan

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AMI: Complexity of the Business Case

A recent piece in T&D World discussed the benefits of Advanced Metering Infrastructure (AMI) in terms of how they stem from a "complex and long-term value chain" and talked about such benefits can be easily misunderstood and underestimated. The article reveals results of a recent study regarding peak demand reductions after implementation of AMI and Time of Use (TOU) rates at a utility.

More here

Arizona: Utility Signs Solar-Storage Contract for Peaking Supply

Tuscon Electric has signed a contract that includes solar and storage that is designed as a peak period option for the utility's portfolio. It is said to be notable for the low $/kWh in the contract and seen by experts as a sign of further reductions to come.

More here

California: New Development in DR Proceeding

An Administrative Law Judge recently issued a ruling requesting responses to questions regarding the pathway to new models of demand response, implementation of the competitive neutrality cost causation principle, and identification of remaining barriers to the integration of demand response into the CAISO market

More here

Clean Energy: Coal Plants Canceled In India

Nearly 14 Megawatts worth of coal plants on the drawing boards in India have been cancelled and the government there had admitted that another 8+ MW in operation are non-viable. Rapid deployment of solar under a low-price solar tariff is cited.

More here

Clean Energy: State Deployments vs. Political Leanings

A recent piece in the NYT pointed out the dichotomy between clean energy deployment and the politics of state voters as evidenced by choice of candidate in the last Presidential Election. The five states that get the largest percentage of their power from wind turbines - Iowa, Kansas, South Dakota, Oklahoma and North Dakota - all voted for President Trump. So did Texas, which produces the most wind power in absolute terms. Furthermore, 69 percent of the wind power produced in the country comes from states that Mr. Trump carried in November. The article discussed reasons why this is the case.

More here

Clean Energy: OECD Says Tackling Climate Change Will Boost Economic Growth

A new report from the Organisation for Economic Co-operation and Development (OECD) says that the integration of measures to fight climate change into economic policy will aid economic growth, both in the medium and long term. It states that "strong fiscal and structural reform combined with coherent climate policy" would help governments generate growth that would both lessen the risks of climate change and provide "near-term economic, employment and health benefits."

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Clean Energy Jobs: Impact on "Blue Collar" Part of Clean Energy Sector

A recent story in the WP focused specifically on impacts and attitudes among blue collar workers in the solar, wind and other clean energy industry segments in light of emerging federal policy that could adversely impact employment in these industries

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Clean Energy: Small Business Outlook

A recent AP story focused on small businesses that install solar and the small businesses that supply that solar. The story shows optimism among the latter sector that their sector will continue to grow regardless of recent moves by the White House such as exiting the Paris Accord. It reveals that hey are confident in two trends they see: A growing awareness and concern about the environment, and a desire by consumers and businesses to lower their energy costs.

More here

Clean Energy Jobs: Energy Efficiency

The Minority (Democratic) Side of the Joint Economic Committee in Congress has issued a Report that discusses the importance of energy efficiency to the country's economy. It includes detailed data by state of energy efficiency-related employment.

More Here

Clean Energy and Security: New Report From Military Leaders

A new report, called Advanced Energy and U.S. National Security, is the seventh analysis put out in 10 years by CNA. Initiated in 2015, the study was led by 14 U.S. generals and admirals and a retired British Royal Navy rear admiral. The Study says that countries that try to lead on new energy options have a lot to gain on the global geopolitical stage.

More here

Climate Change: 8 of 10 Consider It a "Global Catastrophic Risk"

Reuters recently reported on a new survey that shows that nearly nine in 10 people say they are ready to make changes to their standard of living if it would prevent future climate catastrophe. The survey of more than 8,000 people in eight countries - the United States, China, India, Britain, Australia, Brazil, South Africa and Germany - found that 84 percent of people now consider climate change a "global catastrophic risk".

More here

Climate Energy: A Look At Changes Within Agencies

A recent WP article looked at a number of different changes that are taking place within federal agencies in recent months, ranging from elimination of offices and bureaus to "re-branding" of a number of efforts.

More here

EIA: Clean Energy Penetration Happening Faster Than Forcaste

A recent issue of the U.S. Energy Information's (EIA) "Electric Power Monthly" (with data through March 31, 2017) reveals that renewable energy sources (i.e., biomass, geothermal, hydropower, solar - inc. small-scale PV, wind) accounted for 19.35% of net U.S. electrical generation during the first quarter of 2017. This percentage predicted by EIA only 5 years ago to not occur until the year 2035.

More here

Electricity Demand: Issue of Natural Gas Glut and Decreasing Electricity Demand

Bloomberg recently looked that the glut of cheap natural gas from a

"single, gigantic", shale basin that straddles the Northeast, mid-Atlantic and Midwest has sparked a massive construction boom of power plants, with dozens having been built in the past two years alone. It contrasts this to what it calls not nearly enough electricity demand to support all the new capacity. The article states that industry experts are anticipating a fire sale of scores of plants in the region.

More here

Electricity Pricing: Commissioner Essay On Free Market Potential

Montana Commissioner, and recent NARUC President, Travis Kavulla recently published an essay in the journal Foreign Affairs entitled "There Is No Free Market for Electricity: Can There Ever Be?. The work focused on the intersection of long-held assumptions on electricity affordability and availability with the industry modernization and evolution.

More here

EVs: New Results From Pilot Focused on DR

Pacific Gas & Electric and BMW have released the results of an 18 month DR pilot program, which the companies say demonstrate that aggregated vehicles can function as a flexible grid resource.

More here

EVs: New Report From IEA

The International Energy Agency (IEA) has taken a global look at deployment of EVS and issued a new document called Two Million and Counting. The number in the title is the estimate by the IEA of how many EVs are presently in use. Forecasts are also included.

More here

FERC: Technical Conference on Reliability of the Bulk Power Plan

On June 22, FERC will hold a Technical Conference on the Reliability of the U.S. Bulk Power System. The event will be webcast.

More here

Grid Modernization: New Report Issued on "50 States of GridMod"

The North Carolina Clean Energy Technology Center has issued a new report that reviews status and progress on grid modernization on a state-by-state basis. Included is an assessment of how business and policy models are changing and how various actors are responding to such.

More here

Missouri: Commission Approves New Rate Design

The Missouri Commission recently approved a new rate design for KCP&L that incorporates an "inclining block" structure whereby prices would increase based on a tiered structure for increasing electricity usage. The structure is in contrast to a declining block structure which lowers the price as consumption increases.

More here

Missouri: Commission Rules It Has No Jurisdiction Over Charging Stations

The Missouri Commission denied a proposal from KCP&L for cost recovery of it fleet of charging stations that it wished to include in its rate base. The Commission determined that it did not have jurisdiction over such facitlities.

More here

New York: State Announces Microgrid

NY Governor Andrew Cuomo recent announced that a new microgrid will be developed and deployed to serve the 96 acre state government complex in the capital, Albany.

More here

Nevada: Governors Signs Multiple Clean Energy Bills

Nevada Gov. Brian Sandoval has signed several energy-related bills into law. Included are bills designed to boost battery storage resources and electric vehicles in the state. Another bill is aimed at improving wind turbine siting. The most major one, however, restores net metering in the roof-top solar sector, albeit with a reduce compensation rate that will be further reduced over time.

More here

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Reliability: Focus on Intermittency of Clean Energy Options

The NYT recently looked at some of the questions being asked about the Department of Energy's new study underway looking at the impact of increasing amounts of variable clean energy options such as wind and solar.

More here

State Regulation: Role of State Regulators

A recent feature in Midwest Energy News interviewed several industry experts about the status of state policymaking on grid modernization and

the role of state regulators in that process.

More here

Storage: Gigafactories in Europe

A recent piece in Bloomberg noted that European entities are proceeding with the planning and development of so-called giga-factories for the production of batteries.

More here

Storage: McKinsey Report Bullish on Economics and Adoption

McKinsey research has found that storage prices are dropping faster than expected and storage is already for many commercial customers to reduce their peak consumption levels. It says that storage is starting to play a broader role in energy markets, moving from niche uses such as grid balancing to broader ones such as replacing conventional power generators for reliability,1providing power-quality services, and supporting renewables integration.

More here
