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**Subject:** FW: net metering hearing:2019 256

**From:** Yahoo [REDACTED]  
**Sent:** Thursday, November 14, 2019 2:47:23 PM  
**To:** Melnykovych, Andrew (PSC) <[Andrew.Melnykovych@ky.gov](mailto:Andrew.Melnykovych@ky.gov)>  
**Subject:** net metering hearing:2019 256

Dear Mr. melnykovych,

Yesterday evening I emailed the PSC my recommendations concerning the net metering issue after having attended yesterday's hearing. This morning I reread text and made a few editorial changes and clarifications that constitute the email text below. Please substitute the text below for last night's submittal. Thank you.

Sincerely,  
Richard S. Levine.

Nov 13 at 11:58 PM  
PrintRaw message

Yahoo [REDACTED]  
**To:** [psc.info@ky.gov](mailto:psc.info@ky.gov)  
Dear Vice-Chair Robert Cicero and Commissioner Talina Mathews,

I was privileged to attend the PSC hearing this afternoon concerning the question of possible changes of the current net metering regime. I was impressed by the intelligence, wisdom and even handedness you demonstrated in running the hearings. In my intervention as a long-winded professor I didn't get to my most important comments within my allotted five minutes. To make up for that I respectfully submit the notes below:

The Public Service Commission is facing a dilemma: What stand is it to take relative to the question of net metering to report back to the legislature at the end of the year? What recommendation is it to make in response to SB-100? Does it follow the wishes of the utilities and do all it can to kill distributed solar in Kentucky, or at least take some strong initial steps to send a signal that it continue to pursue measures that will weaken distributed solar until it succeeds?

The alternative is to acknowledge what needs to be done, what can be done, and what is already being done in one way or another in many other countries? What do they know that we do not know? Why has every other country signed the Paris Accords while we are now canceling our participation in that necessary document, however flawed it may be? We know what we must do. We know how to do it. The question is just how to effect the transition to renewables with a minimum of disruption.

At the hearing it became obvious that the various arguments about fairness etc. made by the power industry are just excuses to justify measures aimed to insure their only interest, which is that they will do everything they can to maintain their monopoly control over power generation in the Commonwealth.

There are two developments that in recent years have made the transition to 100% renewables if not inevitable then both feasible as well as being the least cost option for our energy future. The first is energy conservation; the design and construction of better buildings that consume less energy and already are causing consternation on the part of the utilities who still see their business plan as one of maximizing the sale of energy, when they see increasing conservation measures causing the decline of power usage. We are not far from the point when the "Passive House" standard for building performance will likely become integrated into the national energy code. Passive House buildings, certified by third party inspectors, now use 75% to 80% less energy than identical buildings using conventional construction. As such such buildings need a far smaller solar PV system in order to reach net zero. Such buildings are now being built at market rates all over the country, particularly in multi family housing. The extra cost of PV in order to reach net zero can easily be financed through on-bill financing and still have lower monthly carrying costs than conventional construction. (Disclosure: I am on the Board of Directors of PHIUS - the Passive House Institute of the U. S. and would be pleased to provide the commission with documentation of th

e many successful projects that have already been completed.) Many state housing authorities have provided added incentives to bidders on housing projects to build them to the Passive House standard. Many developers are getting the hint, thereby winning project contracts.

There is another recent development that shows equal or even greater promise and that is energy storage. Hardly a week goes by when some new storage concept is announced either in laboratories or in commercial development - some of them offering even greater promise than the current lithium-based batteries that themselves have been such an important breakthrough. Such characteristics as higher capacities, lower costs, lower charge times, lighter weight, higher energy density, etc. are all in the offing. They won't all be successful, but some of them will. A simple thought experiment will reveal some highly useful consequences, both for consumers as well as the utilities. Seven years ago I presented a number of seminars to the director of research of KU/LG&E, John Moffett and his team. The proposal had the blessings of the Lexington Homebuilders Assn. for their Home of Excellence at their annual Parade of Homes. The idea was to build an otherwise conventional home, except that it would be built to Passive House standards. It would be outfitted with battery storage that would carry it through so many days without grid power. There are many different things one could do with this demonstration home. Here's just one scenario. In the first instance the owner would finance the added cost of these features through

on-bill financing (as is already being done in Kentucky through MACED and others.) The utility for its part would get to control both the timing of the charging of the batteries (from solar PV or if it likes from the grid itself when there is extra power being generated that needs to be shed), as well as when to discharge the batteries either for use in the house or to return the power to the grid. The house is occupied and run by the utility without the occupants noticing anything to do with the home's performance as the batteries are managed according to the needs of the utility. From the data collected, the utilities can model a variety of different scenarios of how the utility's grid would work with ten, a hundred, a thousand, ten thousand or 50,000 such houses on the grid under its control of battery charging and discharging. How many such houses would the utility need to shave its peak demands to practically zero - an enormous saving to the utility when the peak loads and the average loads become virtually the same, when they don't have to run inefficient peaking plants all the time, and potentially where they don't have to make any real investments in capital equipment as the consumers would be investing in the equipment through energy savings in their electrical bill and after perhaps ten years, when the investment is paid off, all the savings would go right into their pocket. Better yet this experiment where the modeling of the one house is replicated in an increasing number of first, new homes and then in retrofits, the project would be organized and contracted as a partnership between the utility and the consumer where they become partners in an endeavor where their interests are very nearly the same. Eventually the utility can shut down all its fossil fuel units and also continue to build base load solar arrays together with large storage systems to account for dense urban structures that have insufficient solar access to supply all their needs.

By now a number of forward looking utilities are already experimenting with successful systems that use some of these concepts. Unfortunately, utilities are dinosaurs and are highly resistant to change and as their profit structure is in the hands of legislatures and PHC's and as regulated monopolies they do not tend to be responsive to either logic, science or efficiency, but look to find selective arguments of how they can influence the decision makers to increase or at least maintain their profitability following a business as usual strategy without having to spend their efforts to respond to changing conditions or opportunities. But the world isn't standing still. On the one hand there are terrible crises brewing and on the other there are brilliant, dedicated people, companies and governments seeking to find the solutions to these local and global problems. But there is no standing still and the utilities are rather spending a lot of capital to get both legislature and PSC to take a small yet ultimately significant step backwards. They want the PSC to eliminate or at least reduce the net metering program to less than 1 to 1 or if not that to at least take the step to raise the base rate - the utility hook-up charge above the already raised rate charge with the argument that PV suppliers should have to pay as much as other rate-payers for non energy generation related charges. This of course discourages rate-payers from conserving energy much less installing renewable energy generating systems.

Our job is to prevent the utilities from cutting their own throats. Of course they don't really want to do renewables at all - it's not in their DNA, but if large scale solar PV systems are to be built they want to be the ones to do it so as to maintain their monopoly status. They don't realize that it's a little too late for that, what with the advent of community solar, microgrids (even DC microgrids) and the enormous proliferation of distributed solar in other parts of the country. Perhaps they believe that it's not too late to stop it in Kentucky, but it is already too late even here. The utilities need the small sale businesses that install and maintain solar PV systems. Such operations don't fit their business model, yet they know that their business model needs to change even as they try to deny it.

The world is in crisis and it is criminal to deny it. The utilities are exerting great pressure to fix something that isn't broken, yet they seem to be in total denial of something that is broken. The many stories and testimony of dozens of Kentuckians at today's PSC hearing were convincing and stood in stark contrast to the polished but distorted presentations of the utility "experts." Renewable e

energy is the catalyst that is attracting the diverse solutions to the many problems that plague us. Renewables are the basis of sustainability and sustainable cities (which are my own topics and the topic of my two books), Kentucky is actually a good candidate for a conversion to 100% renewable energy. We are in an exciting time where we are seeing the increasing availability of promising technologies. Now is not the time to reverse course just when some real possibilities for Kentucky are about to flower.

Sincerely,  
Dick Levine


P.S. I would be pleased to host a tour of the PSC at my home and studio to show you a number of sustainable scenarios for the future that relate directly to the current discussion. Unfortunately it will need to wait until Mid January when I return from doing my sustainable city work in China, but would be happy to answer any questions before I leave on November 30.

Richard S. Levine, Principal Architect

Center for Sustainable Cities Design Studio

“Sustainability Driven Architecture and Urban Design“

2010 ASES “Passive Solar Pioneer”

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