

Comments by James Adcock on UE-200304 PSE's Draft IRP and Conduct towards Participants in its IRP Process

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Commenting party's name: James Adcock, Electrical Engineer

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I am asking that UTC accept this email in lieu of speaking at tomorrow's meeting in part because I am recovering from a serious injury-accident which almost killed me, but also because I believe you will have an overwhelming number of speakers tomorrow.

I speak briefly and informally below, using the language of an electrical engineer with long experience in issues of climate change and humanitarian issues of trying to preserve human life, particularly in future generations. My words should not be construed in the "legal" sense – I am not lawyer nor a prosecutor and my words should not be construed in that sense – which I will leave to UTC commissioners to judge.

My entire career – I am now 63 years old – so I've been doing this for over 40 years now – has been in the field of statistical analysis and statistical modeling of systems. I am a graduate of MIT in electrical engineering, and I have worked for several of the largest and most famous companies in the PNW. I am very successful at what I do.

In terms of PSE's current Draft IRP I will merely state the obvious: That PSE's Draft IRP is so incomplete and so devoid of real and meaningful contents that no one can comment in a meaningful manner on that Draft IRP. As such, PSE's current behavior is simply another ploy to avoid clear requirements under law, and to prevent meaningful, and required, public participation in the IRP process.

I have participated in PSE's IRP meetings as a public participant for about a dozen years now. During those years I have seen a constant decline in the quality of the public participation that PSE has \*in practice\* permitted during their IRPs, until during this and the previous cycle the permitted actual, meaningful, public participation has gone to zero. The way PSE accomplishes this is multiple: They waste time, with constant failures of their presentation equipment, they engage in meaningless monologues intended deliberately to burn up time, they save the most controversial matters to the end of meetings – and then make sure there is no time to discuss them, they refuse to acknowledge the "hand raises" of people who they know want to ask serious questions of the meeting matter at hand, and they "answer" the questions of professionals like myself at the kindergarten level – providing no

real answer at all. It is obvious to all participants by now that none of this is “by accident” – rather all of this is careful, studied, deliberate ploys.

Let me give you a few specific examples:

As I hope everyone knows by now, I have been objecting to the false statistical methods that PSE uses to estimate peak system requirement, and I have been so objecting for the last dozen years. PSE has “Weather Data” – actually “Climate Data” – going back in time to the 1930s. PSE had told participants in this IRP cycle that they were only going to use recent Climate Data in this IRP cycle, but that turned out to be lie, where late in the IRP cycle PSE went back again to use this “prehistoric” Climate Data. Basically by the middle of the future targeted design period, PSE’s Climate Data will be 100 years out of date. During these years, the coldest winter days have warmed from zero degrees F to now – in recent decades – the coldest winter days are now about 18 degrees F – already, now, today – not even predicting what future warming will hold. This extreme warming of coldest winter days is strictly a coastal PNW phenomena, for example the inland regions of the PNW have not seen a similar degree of warming of coldest winter days, neither has California, and Portland lies roughly halfway in between. To contrast PSE’s use of 100 year old data to represent “Climate” note that NOAA – the nation’s official weathermen – only use \*The Most Recent Decade\* -- only the latest ten years, to predict what the Climate of a region is! In using this outdated data PSE violates “Freshman Statistics” – they are basically doing “Monte Carlo methods on non-stationary data” – but if they bothered to read their Freshman texts they would find that Monte Carlo methods \*Do Not Work On Non-Stationary Data” – they do not work on data where the coldest winter days are rapidly warming. What does this mean in practice? It means that PSE may be exaggerating their peak system requirements by as much as 20% ! Clearly PSE wants to show more reliance on natural gas than is really necessary, and they want to build more NG Peakers than are actually necessary, so they engage in these falsehoods. These falsehoods in turn mean that all the PSE calculations of “the cost-effectiveness” of additional NG Peakers are in turn completely false – with the additional value added to ratepayers of these additional new NG being virtually nil.

Here’s a second example of PSE’s behavior: I asked PSE to provide me with a copy of their assumed modeled “typical” Washington State Wind Turbine output. I asked to see this so that I could evaluate whether or not PSE was treating Wind Turbine potential in Washington State fairly. In particular I do not believe PSE’s extremely high correlation numbers assumed between new wind farms built in Washington State. It is almost as-if PSE assumes that each new Wind Farm in Washington State is built exactly on top of each other, so that there is perfect correlation between each of those Wind Farms, and thus there is no “Wind Diversity” whatsoever. In fact let me restate this as a posit: PSE in their modeling efforts assumes that all new Washington Wind Farms are built exactly on top of each other, resulting in “perfect” correlation, and little contribution to peak capacity – as PSE frequently reports, and falsely I believe. Conversely, about 1/3 of the time Wind Farms in Washington run with large meaningful output. Thus, if you had a system that otherwise fails once in 20 years, adding significant Washington Wind farms would “save your bacon” about 1/3 of the time, meaning your failure rate would be once every 30 years. And if you add Washington State Wind Farms to added Montana Wind Farms, the added wind diversity means that 2/3rds of the time there is meaningful output from those Combined Wind Farms, and adding these Combined Wind Farms to an otherwise existing system would increase the expected time between failure from 20 years to 60 years!

In any case how did PSE respond to my request for the exact data they were using for modeling? They pointed me to a one terabyte government Wind Database and said “Go Fish!” – “We’re not going to tell you what data out of that database we chose to model “Washington State Wind.” Since the amount of data PSE used out of this database is about a megabyte, that means that there is literally about one chance in a million that I could find the data which PSE actually used. What would be a logical explanation why PSE refused to give me an open and honest answer to my data request? Simply that PSE is acting in a fraudulent manner in their modeling of Washington Wind Data, such as falsely underreporting how much Washington Wind Data would actually contribute to peak system capacity.

Finally, let us consider how PSE is modeling battery systems: PSE assumes that battery systems have to be attached at the end of an expensive 5 mile stub line. Why does PSE make this assumption? Simply to raise the modeled price of battery systems. I reviewed the major new battery systems being actually installed by other utilities in the US and they do not install batteries on the end of 5 mile stub lines. Why not? Because it would be needless and stupid to so. Rather, battery systems can and are being installed “right next door” to existing utility infrastructure, such as an existing switching station, or an existing renewables generation farm, such that the stub line cost is essentially ZERO, and not the assumed 5 miles. Yet PSE refused to change their modeling. Why not? PSE wants to engage in fraudulent modeling of battery costs, to keep them from being cost-effective alternatives to new NG peaker plants.

Finally, let me put some context to my last dozen years of engagement with PSE, and why I consider PSE’s actions “serious.” I feel that UTC’s response has been “lawyerly” – “well, of course PSE is going to engage in ploys, that is what utilities do.”

I see this differently: Depending on how you do the calculations you will find that PSE is currently, by itself, consuming the sustainable carbon footprints of between 1 million and 4.5 million human beings. That means that if PSE is allowed to continue its current behavior there will be between 1 million and 4.5 million fewer people on the planet. When you see pictures of starving or dead children in Africa you need to think “PSE” every time you see those children.

So I have a different word for PSE’s constant “Ploys” to continuously and needlessly emit excess greenhouse gases, that word is: “Genocide.”

Please take PSE’s continual disingenuous actions seriously! This has got to change! Regulate In Practice! Make them change NOW!

Sincerely,

James L Adcock, Electrical Engineer