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Comments by James Adcock, Electrical Engineer, MIT, stakeholder participant in PSE's IRP and CEIP processes for more than a dozen years.

Let me respond here based on the entirety of my experiences with PSE, as applied to this CEIP.

First of all, we know what PSE should be doing in this CEIP, because PSE has told us what they should be doing, as part of the IRP process for the last dozen years, in their so-called "Green World Scenario" – which is exactly what CETA is – the "Green World Scenario." And PSE told us, for a dozen years, is that if the "Green World Scenario" came to past, then PSE would have to respond by building about a dozen Wind Farms, as fast as possible, about one Wind Farm per year.

And now PSE is there, as we have warned PSE for the last dozen years, now PSE is in the "Green World Scenario." So, does PSE build a dozen Wind Farms? No, they do not. Instead, what they tell IRP Participants – without rational explanation is: "No, We are not going to do that."

Well, why not? For the last dozen years PSE told us they were going to do that, and now that they are there, they say "NO, we are not going to do that."

What does PSE say they are going to do instead? PSE states they are going to build Hydrogen Generation Plants. So, what's the problem? There is no Hydrogen. Let me say that again for emphasis: There is no Hydrogen. So how can PSE build Hydrogen Generation Plants if there is no Hydrogen? They can't. PSE is misrepresenting what they are actually planning to do. What PSE is actually planning to do is to build Natural Gas generating plants. PSE just believes that they can fake people – including UTC regulators I guess – into believing that Natural Gas generating plants are Hydrogen generating plants by merely calling them Hydrogen generating plants. But: There Is No Hydrogen!

Where would that hydrogen come from – in theory? Well, in theory, if there was an excess amount of renewable energy that no one knew what to do with, and that renewable energy was somehow available "for free" – even though I'm sure Commissioners realize that it takes real ratepayers' money to build renewable plants – Wind Farms and Solar – well, if somehow, magically, that renewable energy was available in excess and for free – even though neither of those things are true – then PSE could use that magical unicorn renewable electricity to create magical unicorn green hydrogen, and use that magical unicorn green hydrogen to power their new proposed Natura Gas Generation Plants instead of using Natural Gas.

Well, I guess that magical unicorn "free" renewable electricity could from PSE building way too many Wind Farms – the so-called "Overbuild Option" – except that PSE is now telling us that, contrary to what they told us for the last dozen years, they are not going to build those Wind Farms. So, There Is No Hydrogen. There is no Magical Unicorn. These plants are going to run on Natural Gas. Even if PSE, deceptively, calls them "Hydrogen Generation Plants."

But, someone might say, PSE is just holding these new natural gas plants in reserve for the extreme once in 20 years situation when PSE claims they have to use those plants to "keep the lights on."

[PSE doesn't actually keep the lights on, as I have discussed many times. And PSE always exaggerates their peak capacity needs – in order to justify building new Natural Gas Plants. [And as I write this PSE just lost power at my household in South Bellevue, again, for eight hours, and never even gave us a truthful meaningful prediction about how long the lights would be out.]]

Except that is not a true statement -- PSE will not be holding these new Natural Gas Plants in reserve, to be used "once in 20 years" on an extremely cold zero-degree winter day [which no longer exists anyway.] Rather, PSE will be using these new Natural Gas plants, paid for by Washington State Ratepayers, all the time, to provide electricity to Californian ratepayers. Washington State Ratepayers foot the bill, but Californian ratepayers get the benefit, and PSE earns the profit. On the backs of Washington State Ratepayers. While continuing to emit GHG from burning Natural Gas, not Hydrogen.

Which is why PSE keeps insisting that they will not include the "externality cost" of CO2 emissions – from PSE pollution from these new Natural Gas Generating Plants – in their modeling efforts. Because PSE knows if they did so, then these new Natural Gas Generation Plants would not be economically viable to run, and PSE would not then be using them to power Californian homes – and built at the expense of Washington State Ratepayers. Californians don't pay the "insurance cost" of building these new Natural Gas Generation Plants. We – the Washington State Ratepayers -- pay the "insurance cost" of building these new Natural Gas Generation Plants.

Please do not allow PSE to build new Natural Gas Generating Plants – even if PSE falsely calls them "Hydrogen" Generating Plants.

[Commissioners will remember a proposed Coal-Powered Plant from some years ago – which was also pretend-not-emitting, because the project proposers similarly suggested that the Coal Power Plant could somehow magically be converted to be non-emitting by non-existing means by also using some kind of magical fairy dust which didn't exist then and still doesn't.]

Let's move on to the next issue. CETA requires in so many words that Utilities get to 80% clean by 2030, where that 80% does not contain any RECs. Commissioners have warned Utilities that their CEIP plans must get Utilities to 80% by 2030, or face real monetary penalties. Does PSE actually plan to get to 80% by 2030? No PSE does not. Instead PSE is substituting their own criteria – invented out of thin air – which is not a part of CETA – which claims: PSE merely needs to waste 2% a year unproductively on dozens of little unsuccessful and extremely cost-ineffective little dog-and-pony measures, in the years up to 2030, and then PSE doesn't actually have to meet the 80% requirement. Except there is no such "off ramp" stated in CETA law. CETA requires that Utilities get to 80% by 2030 PERIOD. Without Exception. Only AFTER 2030, only AFTER the 80% requirement, does the 2% "off ramp" kick in.

Tell PSE, in no uncertain terms, that they are required to get to 80% PERIOD by 2030. No Exceptions, No Excuses, and that it is certainly not the case that merely wasting 2% a year on ineffective extremely costly little dog-and-pony measures is going to exempt them from meeting the 80% requirement. PERIOD.

[PSE wouldn't even raise the 2% fictious off-ramp criteria if they weren't planning to use it as an excuse at a future date when they fail to meet the 80% by 2030 requirements.]

Further, tell PSE that they must implement CETA measures on a Lowest Cost First basis. That there is no excuse to avoid implementing low-cost measures – such as \$35 per Megawatt-hour Wind Farms – which is lower than just the cost of Natural Gas to run Natural Gas Plants! And then to instead implement measures that cost more than \$500 per Megawatt-hour – measures that cost 15X more expensive -- in order just to waste ratepayer money to get to the PSE-wholly-invented 2% mark!

CBIs: The PSE CBI measures are simply invented out of thin air to justify those measures that PSE wants to implement. For example, PSE creates four separate CBI measure that basically measure the same thing: measures going into peoples homes. By putting in the same measure four times – creating a 4X weighting factor – PSE forces the selection of those measures. PSE created a spreadsheet where stakeholders can modify these numbers. As a simple example, I reduced the weight factors on those four CBIs by four – because really there is only one measure there. And I doubled the weighting on the CBI that CETA is all about: "Hey – about if we actually reduce some GHG emissions!?" And when I make those changes in PSE's spreadsheet then suddenly the PSE spreadsheet says that "PSE should do the Renewable Overbuild Scenario"

– that PSE should actually build a dozen Wind Farms. Something that PSE said it would do, for the last dozen years.

Wind Farms are extraordinarily cheap – less than just the cost of Natural Gas to run Natural Gas Generation plants. And with the new Federal subsidies even cheaper. Please tell PSE: Build More Wind Farms. Lowest Cost Measure First. PSE excuses for not doing this are thin to non-existent – they certainly have given stakeholders no excuse about why they aren't actually building the Wind Farms.

Stakeholder Participation in IRPs and CEIP process. PSE's representation of stakeholder participation in the process is simply false. PSE has been extraordinarily hostile to meaningful stakeholder participation in recent years. PSE doesn't acknowledge raised hands. PSE gives kindergarten-level answers to serious technical questions. PSE talks-and-talks to run out the clock without letting anyone ask questions. PSE puts the most controversial issues at the end of the meeting – knowing they will run out the clock before we get there. PSE tells people to put their questions or comments into writing – and then "consolidates" those questions and comments into meaningless nothingness before "summarizing" them to UTC. Etc.

Please get us out of this [explicative deleted] mess! No citizen ratepayer should be treated this way! Experienced professionals have been driven out of the process by PSE's behavior. Dozen if not hundreds of environmental activists have been driven out of the process by PSE's relentless war on stakeholders. UTC must stop this PSE behavior NOW! Stakeholders are owed REAL participation in the process for a very simple reason: WE WILL BE PAYING FOR IT! Come On Now! Play Fair! Give Us Real Representation for What We Will Be Paying For! And that which our children and grandchildren will be living with – if PSE-induced "Existential Threat" Climate Change doesn't kill them first! That is what "Existential Threat" in CETA Law means: It means that if things don't change NOW, our children and grandchildren will be dead!

In addition to the well-known "SCC" measure "Social Cost of Carbon" there is another lesser-known Scientific Peer-Reviewed measure: "MCC" – the "Mortality Cost of Carbon" – how many people die per ton of GHG emitted. By that measure at PSE's current rate of GHG emissions PSE kills about 4,000 people per year of those emission. For example currently about 9 million people die per year of starvation, much of that drought-induced, and Climate Change warming results in more drought – "Palmer Drought Index." One traditional regulatory measure of Utilities is that they not kill people. PSE is failing this test, and to a needless and excessive degree.

[ Bressler, R.D. The mortality cost of carbon. Nat Commun 12, 4467 (2021). https://doi.org/10.1038/s41467-021-24487-w ]

Finally, while it does not substantially affect what I have discuss here, I have to complain about

PSE latest last-minute "corrections" to their modeling efforts – January 9, 2023 – corrections which do in part reflect on an issue frequently discussed by Environmental Groups with PSE for many years now – namely PSE's choice modeling of the externalities of carbon. And those PSE modeling errors affecting a not-inconsequential 800 MW of new Wind Generation, and a 2.55% lowering of GHG emissions. Such continuing errors reflect the lack of priority PSE is putting on truthfully and correctly modeling in an unbiased manner CEIP needs – even though billions of dollars of Ratepayer money will be spent on CEIP compliance. We need accurate -- and unbiased – modeling. And we are not getting it. Please require PSE to put more resources into accurately, truthfully, and in an unbiased manner modeling for CEIP requirements. And Stop Wasting Ratepayer Money on needlessly extraordinarily cost-ineffective measures!

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