

**BACKGROUND/PURPOSE:** This is a follow up to the 5/12/2021 Resiliency & Microgrids Working Group meeting, subject "Value of Resiliency – Interruption Cost Estimator". There was not sufficient time during the discussions to answer all the questions posed by attendees. Below is a written response from our presenter. (Thank you to our presenter again for sharing his expertise!)

Presenters: Joseph Eto, Lawrence Berkeley National Laboratory

**QUESTION:** Is there linkage between the reliability/resiliency continuum and the Incident Command emergency levels used by IOU's? (Chuck Heisleman [chuckh@pioneercommunityenergy.com](mailto:chuckh@pioneercommunityenergy.com))

**ANSWER (Joe Eto, LBNL):** I am not familiar with the definitions of Incident Command emergency levels used by the IOUs. If they follow a continuum from least to greatest severity, then I expect one could align them (to an extent that would be largely self-defined) to continuum from reliability to resilience - the dimensions of the continuum I listed in my presentation were frequency, duration, and scope (roughly number of customers)

**QUESTION:** Method seems similar to the value of service approach PG&E and other utilities attempted to use during the 1990s, but which was ultimately rejected by the Commission...Are you familiar with these studies, and why they lost favor? (Steven Moss [steven@moss.net](mailto:steven@moss.net))

**ANSWER (Joe Eto, LBNL):** The VOS studies conducted by CA IOUs were used, along with many others, to develop the ICE Calculator. I have not, however, reviewed whether/how they were used in CPUC proceedings or what roles they did/did not play in the final decisions.

I contacted the author of the original CA VOS studies and asked him to fill me in on the details of how the studies were treated in CPUC proceedings in the 1990's. He reported that there were two separate "eras". During the first era, in the late 1980's, the initial VOS studies were controversial because of primitive state of the conjoint analysis that was employed. This was followed by a second era, starting in 1993, when improved analysis methods were implemented that overcame earlier shortcomings. The author reports that studies dating from this time going forward were accepted by the CPUC.

**QUESTION:** Would it be possible to demonstrate the hybrid approach with PG&E (in the same manner that's being done with Commonwealth Edison)? (Steve Shoemaker [steven.shoemaker@cpuc.ca.gov](mailto:steven.shoemaker@cpuc.ca.gov))

**ANSWER (Joe Eto, LBNL):** Yes. We would be very interested in conducting a demonstration of the approach with a CA IOU.