

**DOCKETED**

<b>Docket Number:</b>	21-ESR-01
<b>Project Title:</b>	Energy System Reliability
<b>TN #:</b>	239209
<b>Document Title:</b>	Steve Uhler Comments - Reliability requires traceability
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Steve Uhler
<b>Submitter Role:</b>	Other Interested Person
<b>Submission Date:</b>	8/7/2021 8:59:32 AM
<b>Docketed Date:</b>	8/9/2021

*Comment Received From: Steve Uhler  
Submitted On: 8/7/2021  
Docket Number: 21-ESR-01*

## **ESR-21-01 Reliability requires traceability**

ESR-21-01 Reliability requires traceability

You can't control a system where information is not complete and accurate. Producing regulations is not enough, validating the data and methods of control are required.

A paradigm shift has to happen at the commission. Data is not used to full potential at the commission. This lack of use leads to inaccurate data. Inaccurate data leads to failure. If the commission has not achieved ISO 9001 compliance, doing so will cause the required paradigm shift.

The commission needs to adopt a mindset similar to human flight awareness. Human flight awareness endeavors to design graceful degradation and the ability to compensate into to the system. All systems degrade at some point, it is a question of degree of degradation and ability to compensate that governs reliability.

The commission has a perfectly designed system, to achieve the results the commission is getting. If the commission wishes to change the result, the commission should redesign the system.

Analog modeling must be prohibited. Discrete event scheduling must replace analog modeling. Analog modeling is limited in ability to identify any discrete events that will cause failure. Producing a more complex analog model can lead to methods that are difficult to validate.

Discrete event scheduling uses two main components, Item Master and Bill of Material to build product structures. All items can be represented in product structures. From the wires at the output of the revenue meter, the point where the courts identify electricity as a product, to the mined material used to produce the energy sources.

By use of this method of building product structures, capacity to build the product structures in a timely manner is more easily achieved.

Only data traceable to a validated source shall be used. Data that is inaccurate or imputed must not be allowed to enter the system. All missing data must be added.

Using the scheduler to identify discrete events as short as a few milliseconds that could cause failure are completed in a timely manner. The ability to step through the process the scheduler uses to identify the cause of failure can also be completed in a timely manner. The scheduler can post its output for wide review. This allows a higher ability to support decisions and will improve accuracy of data and methods use by the scheduler.

This will improve energy system reliability.

Steve Uhler  
sau@wwmpd.com