

Chat Log C:\Users\NMatz\Documents\ChatLog 2017 Electrical Reliability Workshop 2017_09_15 15_07.rtf

Nicholas Matz (to Everyone): 13:17: 2/ Once again, Bridle Trails BTR circuit was the worst circuit in Bellevue for exceeding PSE system SAIDI or SAIFI in 4 out of 5 years. What is being done to improve service and when?

Nicholas Matz (to Everyone): 13:18: The audio log will capture Andy's answer to Norm's question (posted above)

Nicholas Matz (to Everyone): 13:19: BTR-22 undergrounding still in the project planning schedule, according to PSE. Primary issue is operating rights acquisition.

Nicholas Matz (to Everyone): 13:21: Warren H. suggestion: show the calculated old measurement system alongside the new calculated measurement system

Nicholas Matz (to Everyone): 13:21: PSE notes this suggestion.

Nicholas Matz (to Everyone): 13:24: Norm Hansen: slide 10, which is the outlier circuit (past 800 SAID)

Nicholas Matz (to Everyone): 13:25: PSE will find out.

Nicholas Matz (to Everyone): 13:30: Norm H: are these cable replacements (slide 12) underground?

Nicholas Matz (to Everyone): 13:30: Andy: Some are, some are conduit. They still replace proactively across a full set.

Nicholas Matz (to Everyone): 13:31: Andy notes the list on Slide 13 changes every year as projects are completed and new projects are added.

Nicholas Matz (to Everyone): 13:33: Definition of tree wire (reference on slide 13)

Nicholas Matz (to Everyone): 13:35: PSE one of the first utilities to put AMR in the field 15-16 years ago. It is reaching the end of its service life, so transitioning to new AMI technologies

Nicholas Matz (to Everyone): 13:36: The basics/meters for AMI are getting in place; swap out will start in 2018 with full replacement in the next few years

Nicholas Matz (to Everyone): 13:36: AMI offers more for both customers and PSE because of its two-way capabilities

Nicholas Matz (to Everyone): 13:38: DA is installing elements of what is referred to as Smart Grid so that on a limited basis those portions are self-healing or self-act to reduce the scope of an outage. New for PSE and the industry.

Nicholas Matz (to Everyone): 13:38: PSE is locating demonstration DA project sites.

Nicholas Matz (to Everyone): 13:41: Tim S: How much in the CBD is the LUC or other city regulations as impediment?

Nicholas Matz (to Everyone): 13:42: Andy: Not an impediment, but issues with Design Review can extend out the time frame for getting SCADA work done.

Switches are usually in-vault, but in order to add SCADA PSE needs an above ground cabinet for the communications equipment. That can be a DR issue.

Nicholas Matz (to Everyone): 13:43: PSE thus ends up doing more than ROW permit review, with the DR land use action necessary. It adds time to the deployment schedule.

Nicholas Matz (to Everyone): 13:43: Norm H: what are plans for SCADA system in Lake Hills area?

Nicholas Matz (to Everyone): 13:44: Andy: No SCADA or DA switches in area Norm asks about. PSE has not seen performance issues where SCADA would make any significant performance differences

Nicholas Matz (to Everyone): 13:44: PSE is using SCADA roll out in areas where there are real, documented performance issues.

Nicholas Matz (to Everyone): 13:45: Don Marsh: Lake Hills performance won't benefit from SCADA?

Nicholas Matz (to Everyone): 13:45: Andy: Nothing in the current circuit performance that warrants that deployment where it has not been documented to make a difference.

Nicholas Matz (to Everyone): 13:46: Don Marsh: isn't Lake Hills-Phantom Lake designed to improve reliability?

Nicholas Matz (to Everyone): 13:47: Andy: Description of how Lake Hills-Phantom Lake will improve reliability. See audio log for details.

Nicholas Matz (to Everyone): 13:49: Don M: Only looking at Lake Hills, not Phantom Lake?

Nicholas Matz (to Everyone): 13:50: Andy: City requires new transmission only on one side of the street, so has to be managed in different ways. The city has also asked PSE to coordinate with the City's SE 16th CIP project.

Nicholas Matz (to Everyone): 13:53: DA is not a substitute or an equivalent to transmission improvements

Nicholas Matz (to Everyone): 13:53: Norm H: performance of Lake Hills transmission?

Nicholas Matz (to Everyone): 13:54: Andy: The line did not go out of service in the 2014 issue; PSE took it out of service to fix it. Times of out service do not dictate the reliability.

Nicholas Matz (to Everyone): 13:57: PSE sees Spring District as an opportunity to test and roll out new system answers to help customers for reliability, energy efficiency, services the want.

Nicholas Matz (to Everyone): 13:58: Laura: PSE looking to examine new opportunities for storage options to augment external sources, including DR technologies, green field approaches

Nicholas Matz (to Everyone): 13:58: PSE's system plan is anticipating increased load from Spring District including the new distribution substation at Vernell

Nicholas Matz (to Everyone): 14:01: Warren H: any metrics available from Bellevue Urban Smart? Seattle usage flat even though cranes are everywhere.

Nicholas Matz (to Everyone): 14:01: Nicholas: will pursue Urban Smart metrics data offline...to Warren.

Nicholas Matz (to Everyone): 14:02: Warren: try out new technologies in areas that are not urban Bellevue.

Nicholas Matz (to Everyone): 14:03: Warren: specific question about BelRed area: conversations with Wright Runstad about undergrounding transmission?

Nicholas Matz (to Everyone): 14:03: Andy: No, and the EE corridor does not go through the Spring District area.

Nicholas Matz (to Everyone): 14:05: DA is reactive, not predictive (Slide 15)

Nicholas Matz (to Everyone): 14:08: Norm H: current locations for DA demonstration projects in Bellevue?

Nicholas Matz (to Everyone): 14:11: Slide 16: PSE are getting more and more data from these three systems (rolled out in 2013) in order to affect company response to outage events

Nicholas Matz (to Everyone): 14:12: This CIS, GIS and OMS data informs rate case discussions.

Nicholas Matz (to Everyone): 14:21: Chrissy Lein: EE in two phases? Why is that?

Nicholas Matz (to Everyone): 14:22: Keri P: Two phases is based around the construction aspects of the projects. Need to sustain reliability

Nicholas Matz (to Everyone): 14:22: Chrissy L: New info then?

Nicholas Matz (to Everyone): 14:23: Andy: EE system construction is staged so that all service can be maintained reliably while new construction is occurring

Nicholas Matz (to Everyone): 14:24: Chrissy Lein might be Jeane Demund ;)

Nicholas Matz (to Everyone): 14:30: Warren: System capacity measures and how often are load flow studies done?

Nicholas Matz (to Everyone): 14:31: Warren: Slide 17 system capacity defined?

Nicholas Matz (to Everyone): 14:31: Andy: PSE bulk power movement

Nicholas Matz (to Everyone): 14:33: Jeane Demund: In terms of reliability, batteries can't be used in place of EE because they can't be used in corrective action plans

Nicholas Matz (to Everyone): 14:34: Andy: PSE does have a CAP in place but it puts customers out of service. CAPs are in place when a system part might not have the level of redundancy or capacity to keep everybody in service when things happen to the system

Nicholas Matz (to Everyone): 14:37: Norm H: 20% of the outages are coded BA, which is bird or animal. What can be done to reduce this number to even maybe near zero over a 5 year period? It seems that many in Bellevue have animal guards to protect against this type of outage.

Nicholas Matz (to Everyone): 14:37: Andy: PSE would love to go to zero on this metric, but it is virtually impossible, except to minimize design of equipment to

allow BA in

Nicholas Matz (to Everyone): 14:40: Norm H: Consider a more proactive retrofit program?

Nicholas Matz (to Everyone): 14:40: Andy: Yes, we are doing that now.

Nicholas Matz (to Everyone): 14:42: Norm H: On CAPs; how often have they been engaged to impact Bellevue's reliability metrics?

Nicholas Matz (to Everyone): 14:45: Jeane Demund: Any near-future deployment of batteries to enhance reliability in Bellevue?

Nicholas Matz (to Everyone): 14:48: PSE: Pilot project in Whatcom County in Glacier; last month able to successfully "island" a portion of the town with the battery project.

Nicholas Matz (to Everyone): 14:49: PSE: Also testing battery storage "behind the meter" customer side proposals.