

Q&A Session for Electric Grid Education and Outreach Workshop (High DER proceeding, R

Session number: 24877091305  
Date: Tuesday, August 23, 2022  
Starting time: 8:28 AM

---

Kelly Murphy – 9:25 AM

Q: Q for Dr. Kristov during his presentation -- "DSO is not a well-defined thing. It's a placeholder for the future entity to be designed in Track 2 of this proceeding" ... how does IEEE 2030.11 Guide for DERMS functional spec – fit into this Track 2 DSO process?

Priority: N/A

Matthew Tisdale – 9:28 AM

A: Good morning, Kelly. Thanks you. I will keep your question for Lorenzo' presentation.

Siva Gunda – 10:56 AM

A: Is there a Dayahead Distribution side forecast done, similar to CAISO operations

---

Richard Khoe – 9:38 AM

Q: Is it correct that there is a key difference between the CPUC and CEC proceedings: the CEC proceeding is seeking to grow DER, whereas the CPUC is neutral on how much DER is needed?

Priority: N/A

Peterson, Robert – 9:54 AM

A: Addressed verbally

---

Richard Khoe – 9:39 AM

Q: If so, how does that affect the way the CPUC and CEC will work together?

Priority: N/A

Peterson, Robert – 9:53 AM

A: It's not clear to me at this time how this may impact coordination efforts. Both agencies will be participating in and monitoring the activities and outcomes of the two proceedings. The two proceedings will inform each other.

---

Brett Garrett – 9:39 AM

Q: Are today's presentation slides available for download?

Priority: N/A

Matthew Tisdale – 9:49 AM

A: Brett, slides are available for download here: <https://gridworks.org/initiatives/california-future-grid-study/>

---

Samuel Nash Golding – 9:42 AM

Q: Regarding slide 16 ("Track 2 Scoping Questions and Future Grid Study"), my understanding based on the Scoping Ruling and prior Track 2 workshop materials is that the Track 2 Future Grid Study must additionally "consider of any federal and state jurisdictional ratemaking issues that may be relevant to the implementation of DSO model options" (Scoping Ruling, p. 3). Is this correct?

Priority: N/A

Gabriel Petlin – 9:55 AM

A: Yes, that quote is from Scoping Ruling, so it is correct that this activity is in scope.

---

Brad Heavner – 9:54 AM

Q: On the scope question, is it not the case that this proceeding is open to studying and documenting the potential benefits of high DER scenarios? Setting a target level would not be right, but we shouldn't shy away from incorporating learnings from CEC's OIIP and documenting what benefits can be achieved from higher DER amounts that might not be achieved from lower DER amounts.

Priority: N/A

Gabriel Petlin – 9:58 AM

A: Energy Division generally agrees with the statement. We can discuss this further live.

---

Nick Blair – 10:08 AM

Q: As more DERs come online, how flexible can transmission planning be to accommodate the DERs be used to replace traditional power sources? And how rapidly can this be implemented as state requirements to use renewables/zero carbon resources continue to ramp up?

Priority: N/A

---

Amin Younes – 10:08 AM

Q: Is each local distribution area always connected at a single T-D node, or are there some situations in which a single local distribution area might connect via multiple T-D nodes? If some have multiple T-D connections, approximately how frequent is this configuration (10%, 1%, 0.1%)?

Priority: N/A

Peterson, Robert – 10:15 AM

A: Addressed verbally

Kelly Hymes – 11:14 AM

A: This is Judge Hymes. You were discussing the concern about masked load. Just want to clarify that masked load is only a problem following an outage?

---

Amin Younes – 10:08 AM  
Q: (I am with Cal Advocates)  
Priority: N/A

---

Michael Picker – 10:09 AM  
Q: How much does California depend on the bulk transmission system?  
What challenges will come up as we make the transition to a system  
that depends on local and especially customer power that is two way?  
Priority: N/A  
Peterson, Robert – 10:21 AM  
A: Addressed verbally

---

Tam Hunt – 10:12 AM  
Q: GPI agrees with Brad's statement  
Priority: N/A

---

Scott Anders – 10:12 AM  
Q: I have heard that each IOU has a differently configured system. So  
for wildfire risk mitigation, SDG&E has an ability to more surgically  
shut off sections of their grid vs PGE and SCE? Is this true and could  
you comment on what allows SDG&E to do this and whether PG&E and SCE  
could do something similar?  
Priority: N/A  
Peterson, Robert – 10:17 AM  
A: Addressed verbally

---

Scott Anders – 10:15 AM  
Q: California has relative low load factors (~50%), meaning the  
average load is about 1/2 of the peak load. This means that a lot of  
grid capacity is unused most of the time. Is it possible to manage  
DERs to fill up this unused capacity? Is there a downside to this,  
like thermal issues? Does the grid need some unused capacity to  
maintain thermal balance?  
Priority: N/A  
Peterson, Robert – 10:24 AM  
A: Addressed verbally

---

ken nichols – 10:15 AM  
Q: Do you think CCAs are suited to play the DSO role? If so, what  
distribution voltage would be the transfer point?  
Priority: N/A

---

Robert Perry – 10:18 AM  
Q: Are distribution substations considered part of the distribution

system? If so, shouldn't the T-D interface point on Slide 7 be located between transmission substations (blue boxes) and distribution substations (yellow circles)?

Priority: N/A

---

Tam Hunt – 10:18 AM

Q: Can PG&E discuss its new criteria for Direct Transfer Trip (DTT) installations? What is the average cost now for DTTs?

Priority: N/A

Peterson, Robert – 10:57 AM

A: Addressed verbally

---

shiva Swaminathan – 10:35 AM

Q: Do DSOs have access or use for smart meter voltage reads when doing switching plans? I suspect not?

Priority: N/A

Lorenzo Kristov – 10:40 AM

A: To Amin Younes: Each local distribution area has a single T-D interface substation with the bulk transmission system. In some situations it may be possible to switch some distribution circuits from one T-D substation to another, but those circuits will not be simultaneously actively connected to more than one T-D substation.

Peterson, Robert – 10:54 AM

A: Addressed verbally

Matthew Tisdale – 11:07 AM

A: Addressed verbally

---

Chip Silverman – 10:46 AM

Q: Are Behind the Meter DERs visible on this platform? If not, how do you think about incorporating them?

Priority: N/A

Matthew Tisdale – 11:06 AM

A: Addressed verbally

---

Jose Aliaga-Caro – 10:49 AM

Q: How does demand response work in this scenario? Do you call people to lessen their demand first before switching or does that not come into play?

Priority: N/A

Peterson, Robert – 10:55 AM

A: Addressed verbally

---

shiva Swaminathan – 10:53 AM

Q: Other than at the substation, does the DSO have loading information on a small segment of the line, to facilitate switching circuits?

Priority: N/A

---

Susannah Churchill – 10:54 AM

Q: (question from Vote Solar) The IOUs are currently focusing on what it means to troubleshoot/operate the distribution system, but it seems more important for this proceeding for us to understand how utilities \*plan for distribution upgrades\* to accommodate future DERs and to maximize DERs' value. Is that something the IOUs will cover later in this workshop, or in a future workshop?

Priority: N/A

Matthew Tisdale – 11:06 AM

A: Hi, Susannah. This workshop is focused on operations rather than planning. Your interest in planning for distribution upgrades will not be covered today, but seems likely to be a part of later conversations.

---

Roger Lin – 10:56 AM

Q: Same question re: DR but with energy efficiency?

Priority: N/A

---

Jose Aliaga-Caro – 10:58 AM

Q: so it seems the "future" may be where load that's not needed (e.g., maybe a dishwasher) should be controlled to allow circuit reconfiguration to allow capacity usage for more important load (e.g., life saving devices, or just general power to cook)?

Priority: N/A

---

shiva Swaminathan – 11:03 AM

Q: could you pls elaborate on hardware elements currently in use on feeders and how do you anticipate these devices to proliferate in the future; any new devices/sensors contemplated? what does modernizing the grid mean?

Priority: N/A

---

Elias U – 11:09 AM

Q: How will DSO's be positioned to manage the distribution system of large variable loads like DC Fast Chargers, or large fleets?

Interconnection and planning will be able to address capacity but doesn't answer the randomness and variability to the DSO who ran a study prior to a transfer then the loading changed dramatically.

Priority: N/A

Peterson, Robert – 11:16 AM

A: Addressed verbally

Matthew Tisdale – 11:26 AM

A: So far, I've collected the following terms that may require

additional explanation to help engage our welcome newcomers: DER, Proceeding and tracks, FERC, NERC, and WECC, Power quality, substation, Voltage irregularities. Question to participants: what terms would you add to this list?

---

Elias U – 11:10 AM

Q: additional: voltage control of capacitors or etc. that may be needed on long or heavily loaded circuits

Priority: N/A

---

Roger Lin – 11:14 AM

Q: Would determining community level needs improve load forecasting and therefore reduce possibility of exceeding circuit capacity?

Priority: N/A

---

shiva Swaminathan – 11:14 AM

Q: How long can the circuit be overloaded safely? when u say solar/storage takes a while to come on..how long are we talking about?

Priority: N/A

Matthew Tisdale – 11:55 AM

A: addressed verbally

---

Elias U – 11:14 AM

Q: What are IOU doing about the protection settings of smart grid devices for the future of the distribution system as V2G will enable EV's as distributed generation?

Priority: N/A

---

Alan Bach – 11:16 AM

Q: For your example before the break on rerouting power to different circuits, could you discuss what portions of that process ADMS could automate? All? Are there factors the ADMS could not consider and so the DSO personel would still need to review/approve, and occasionally perform manual adjustments? If DSO personnel would perform manual adjustments, could you provide examples of cases you might have to?

Priority: N/A

Matthew Tisdale – 11:47 AM

A: Addressed verbally

---

Amin Younes – 11:16 AM

Q: What's the upshot of the correlation between feeder load and wholesale price? Are the IOUs suggesting any capabilities that might be possible with correlation, or is this just a "something to

consider" point?

Priority: N/A

Peterson, Robert – 11:32 AM

A: Addressed verbally

---

Elias U – 11:24 AM

Q: How are IOUs planning to share reliability concerns with OEMs as more EV's are joining the system that can affect power quality, operational complexity, standards/policy changes so that OEMs can be good neighbors/partners to the utilities?

Priority: N/A

---

Ben Schwartz – 11:31 AM

Q: Can you explain some of the ways that the IOUs see DERs (and a two-way flow of energy) benefitting the grid/grid operator rather than creating challenges?

Priority: N/A

Peterson, Robert – 11:34 AM

A: Addressed verbally

---

Brad Heavner – 11:33 AM

Q: Is it possible to group circuits into categories -- those that have profiles closely aligned with the system profile, those that differ in one way, those that differ in another way, etc?

Priority: N/A

Peterson, Robert – 11:52 AM

A: Addressed verbally

---

shiva Swaminathan – 11:36 AM

Q: IOU TOU rates for loads tend to be high for 4-9pm; this price signal is optimal from a bulk supply perspective. Is this price signal optimal from a DSO perspective?

Priority: N/A

---

Sarah Salem – 11:48 AM

Q: albumn covers?

Priority: N/A

Peterson, Robert – 11:49 AM

A: Good guess ... kids artwork

---

Delvin Stephens – 11:53 AM

Q: With FERC accepting CALISO 2222 compliance filing Will the Caliso retail programs be absorbed into the new FERC 2222 wholesale program?

Priority: N/A

---

William Driscoll - 11:58 AM

Q: I see them

Priority: N/A

---

Kate Unger - 11:58 AM

Q: yes

Priority: N/A

---

Richard Khoe - 12:09 PM

Q: Terminology can indeed be challenging here. Based on Lorenzo's slide 3 point 4, the status quo is a form of DSO Model, right? And therefore we can also say that adjustments to the status quo is also a DSO Model under this definition?

Priority: N/A

Gabriel Petlin - 12:13 PM

A: Evolution of the current DSO model is in scope of the options to explore, but the goals described in the scope slides applies to all models evaluated

---

shiva Swaminathan - 12:15 PM

Q: could you provide examples from across the globe where DSOs are close to operational?

Priority: N/A

Peterson, Robert - 12:20 PM

A: Addressed verbally

---

Robert Perry - 12:15 PM

Q: How will the activities of a DMO (Distribution Market Operator) interplay with transactions managed by the EMO (Energy Market Operator)? Are DMO market operations given preference in order to ensure stable DSO performance? Does the DSO need to sign off on proposed transactions to be bid out by the EMO to the bulk power system?

Priority: N/A

Peterson, Robert - 12:17 PM

A: Addressed verbally

---

Rachael Koss - 12:19 PM

Q: How do you square your process with PUC section 399.2 which defines DSO roles and responsibilities by statute?

Priority: N/A

Peterson, Robert - 12:23 PM

A: It is our expectation that PU Code sections and other legal



topics relevant to the definition of DSO roles and responsibilities would be identified in the Future Grid Study planned to be developed as part of Track 2 of the High DER proceeding.

---

Amin Younes – 12:23 PM

Q: re slide 12: Is it necessary for all DSO roles to be within a single entity? Or, for example, could the utilities take on some DSO role while an another organization, such as an independent planner, takes on some DSO functionality?

Priority: N/A

Peterson, Robert – 1:08 PM

A: Addressed verbally

---

Tam Hunt – 12:36 PM

Q: How do we quantify/characterize the expected benefits of different DSO models?

Priority: N/A

Peterson, Robert – 1:09 PM

A: Addressed verbally

---

Richard Khoe – 12:45 PM

Q: Successful policy reform generally involves coming to a shared understanding of the problem to be addressed early in the reform process (otherwise everyone is trying to solve a different problem). Looking at Lorenzo's slide 10, where in the 4 steps do we achieve that?

Priority: N/A

Peterson, Robert – 1:09 PM

A: Addressed verbally

Gabriel Petlin – 1:10 PM

A: I think it would help to put back on the screen the specific scope questions related to DSO.

Gabriel Petlin – 1:11 PM

A: DSO Scope: How do alternative DSO models compare in their ability to plan and operate a high DER grid, unlock economic opportunities for DERs to provide grid services, limit market power, reduce ratepayer costs, increase equity, support grid resiliency, and meet State policy objectives?

---

sahm white – 1:10 PM

Q: Just to clarify, Distribution Owner may be separate from the operator, builder, or maintenance roles. For example, conceptually the public may fund the grid which may be owned by an IOU, who may contract for construction and maintenance, and cede operation to an independent entity.

Priority: N/A

Peterson, Robert – 1:11 PM  
A: Thank you, Sahm

---

Brad Heavner – 1:12 PM

Q: For Lorenzo, can you play out some scenarios of different entities or types of entities that could perform the different DSO roles? I understand the value of defining roles first, but it would be helpful to have a picture of different options.

Priority: N/A

Peterson, Robert – 1:40 PM  
A: Addressed verbally

---

sahm white – 1:46 PM

Q: Remember that DER includes loads (incl EVs, HVAC ect), Demand Response (incl new forms of demand flexibility), generation, energy storage, and efficiency improvements. The mix of these will vary by location and region, but some types of these DER will always be available in quantity almost everywhere.

Priority: N/A

Peterson, Robert – 1:52 PM  
A: Good point, and thank you

---

Stephanie Doyle – 2:03 PM

Q: How will the educational piece presented earlier by the Utilities be used for outreach? Are there more digestible ways to present this information other than just a slide show or recording sent out ahead of listening sessions or other outreach?

Priority: N/A

Matthew Tisdale – 2:20 PM

A: addressed verbally. Additional suggestions on how to make educational materials more accessible are very welcome.

---

Kurt Johnson – 2:07 PM

Q: What are the plans to provide financial support for CBO's and others for participating in and providing feedback during listening sessions?

Priority: N/A

Gabriel Petlin – 2:13 PM

A: Funding for CBOs is not part of the proposal, but if you think that is important you could include your feed-back in the comments on the Track 2 outreach plan.

---

Samuel Nash Golding – 2:11 PM

Q: Regarding the outreach slides – this is a bullet-point level summary, and mainly process-focused, rather than an "outreach plan".

Is there any substantive documentation of how participants are being identified / recruited, how these meetings will be structured and facilitated, what sort of commitment / activities / outcomes are expected from participants, how this is being effectively communicated ahead of time, etc.? It will be difficult to provide substantive comments based on what is being provided here.

Priority: N/A

Matthew Tisdale - 2:23 PM

A: Addressed verbally.

---

Nick Blair - 2:13 PM

Q: Is the intent for Track 2 listening sessions with local governments to present the information stated today, and then give local agencies a chance to respond where they have questions/concerns about how modernization of the grid may impact their operations? That feedback may also be useful for Track 1 consultant report.

Priority: N/A

Matthew Tisdale - 2:26 PM

A: Addressed verbally

---

Felicia Federico - 2:13 PM

Q: The DSO Model discussion is of course extremely important, but enormous amount of work will still need to be done to link the issues that communities talk about on the ground to the implications of various DSO models. For example, many under-resourced communities are interested in having community solar built to support renters. There are many current barriers to that, including regulatory, financial, logistical, grid interconnect capacity, etc. How would a given choice of DSO model impact those barriers?

Priority: N/A

Matthew Tisdale - 2:29 PM

A: addressed verbally

---

Felicia Federico - 2:14 PM

Q: Tangible examples should be prepared for the education component of the outreach workshops that link already-expressed priorities of underserved communities to the operation of the distribution grid.

Priority: N/A

---

Roger Lin - 2:17 PM

Q: Is it possible to revise the comment deadlines so that the DAC Advisory Group can provide feedback? This would require waiting for the DAC Advisory Group 9/16 meeting.

Priority: N/A

Matthew Tisdale - 2:34 PM

A: addressed verbally. a email requesting an extension of time

would need to be sent to the service list

---

Sarah Salem – 2:18 PM

Q: will listening sessions be virtual even for hard to reach communities?

Priority: N/A

Matthew Tisdale – 2:35 PM

A: addressed verbally

---

Stephanie Doyle – 2:18 PM

Q: Is there planned funding for long term community outreach regarding distribution planning or will that be decided during the CENA decision? Vote Solar hopes there will be long term funding and processes set up for including communities in distribution planning long term.

Priority: N/A

---

Sarah Salem – 2:19 PM

Q: What will be the main questions of the listening sessions? What foundation knowledge are you expecting folx to have?

Priority: N/A

Matthew Tisdale – 2:36 PM

A: addressed verbally

---

Nimish Bhatnagar – 2:22 PM

Q: Are there any plans for proof of concept/pilot projects to try and answer some of the questions surrounding DS0s?

Priority: N/A

---

Roger Lin – 2:23 PM

Q: How does outreach to educate on the DS0 match with Dr. Kristov's recommendation for DS0 models to integrate community needs/CEC's point to achieve community benefits?

Priority: N/A

Matthew Tisdale – 2:37 PM

A: addressed verbally

---

Stephanie Doyle – 2:30 PM

Q: Can you discuss how you will balance going to communities for feedback on Track 2 and Track 1 when they are on different timelines and different topics but will likely overlap in some ways as far as community needs?

Priority: N/A

Matthew Tisdale - 2:40 PM  
A: addressed verbally

---

David Castle - 2:31 PM

Q: Potential legislative action was mentioned as an outcome of the DSO track. Can you clarify how alternatives/recommendations that require legislative change will be addressed in the proceeding?

Priority: N/A

---

Malcolm Johnson - 2:32 PM

Q: Will the consultants will be responsible for priming participants? Is there a statewide strategy to recruit a diverse group of participants? Are there efforts being launched in underrepresented areas like South LA, Central Valley, IE?

Priority: N/A

Matthew Tisdale - 2:41 PM  
A: addressed verbally

---

Jeff Morris - 2:34 PM

Q: One of the largest barriers to an operating DSO is level of digitization of circuits below substations to customers. Most digitized DER deployments are connecting to an analog distribution circuit below a substation. Knowing the state of distribution digitization will important to know at what level or location of value a DSO could operate. Will a "state of digitization" be part of process?

Priority: N/A

---

Sarah Salem - 2:36 PM

Q: What will the outreach effort look like to inform communities about the listening sessions?

Priority: N/A

Matthew Tisdale - 2:43 PM  
A: addressed verbally

---

Malcolm Johnson - 2:36 PM

Q: Will this group have input not only on the SOW, but the criteria for being a consultant?

Priority: N/A

Matthew Tisdale - 2:43 PM  
A: addressed verbally

---

Brad Heavner - 2:36 PM

Q: Are planning issues off the table for the listening sessions? Many

communities might want to talk about decision making around facility siting, avoiding infrastructure expansion and related topics. How do we get smart grid infrastructure in underserved communities and avoid unwanted infrastructure? We run the risk of failing to get input or talk about synergies if we keep too many walls between tracks.

Priority: N/A

Matthew Tisdale - 2:45 PM

A: answered verbally

---

Roger Lin - 2:37 PM

Q: How do you expect DAC/ESJ residents to understand everything that was conveyed this morning? Isn't just reaching out to residents, especially unfunded and without leveling the playing field, more of a token community engagement effort than a meaningful effort?

Priority: N/A

---

Tyler Valdes - 2:40 PM

Q: How will long-term community engagement be ensured after the listening sessions?

Priority: N/A

Matthew Tisdale - 2:47 PM

A: addressed verbally

---

Tyler Valdes - 2:42 PM

Q: How are disadvantaged and hard-to-reach communities being prioritized for engagement?

Priority: N/A

Matthew Tisdale - 2:49 PM

A: addressed verbally

---

Tyler Valdes - 2:42 PM

Q: How will outreach and education efforts be documented and will documentation be made publicly available?

Priority: N/A

Matthew Tisdale - 2:49 PM

A: addressed verbally

---

Roger Lin - 2:47 PM

Q: How do you expect DAC/ESJ residents to understand everything that was conveyed this morning? Isn't just reaching out to residents, especially unfunded and without leveling the playing field, more of a token community engagement effort than a meaningful effort?

Priority: N/A

---

Elsa Wefes-Potter - 2:48 PM

Q: If a significant group of community based organizations and stakeholders present a hardline of something they DON'T want in a future DSO will that be respected?

Priority: N/A

Matthew Tisdale - 3:26 PM

A: We welcome your feedback on this workshop. Use this form to let the organizers know how we did and what we could do differently next time? <https://forms.gle/a9QD4TkWuxhFUedd9>

---

Felicia Federico - 3:25 PM

Q: Thank you all for a very well organized and important webinar, and for the opportunity to comment.

Priority: N/A