

Rule 21 Working Group 4
Workshop 1 - Kick Off
February 12th, 2020
Meeting Notes

Action Items:

- **Issue 18**
 - 2/13 Parties to send questions for IOUs (stemming from meeting) to Gridworks, who will forward to IOUs
 - 2/24 Parties to suggest re-written problem statements and/or propose beyond those discussed on 2/12
 - 2/25 IOUs to respond to questions from parties
 - 2/26 Working Group call to discuss IOU questions and answers, also problem statements and next steps
 - 3/11 Working Group meeting to discuss issue, align on process for proposal development
- **Issue 19**
 - 2/19 Gridworks to provide alternate versions of problem statements based on meeting discussion
 - 2/25 IOUs and parties to consider types of solutions unique to each IOU related to 2/12 meeting discussion
 - Where can improvements be made in application portals / DBs?
 - 2/26 Working Group call to discuss solutions, with view to party proposals, also issue problem statements
 - 3/6 CALSSA/SunPower/SunStreet to provide issue proposal to Working Group
 - 3/6 Other parties who wish also to provide issue proposals to Working Group
 - 3/11 Working Group meeting to discuss proposals and next steps
- **Working Group Logistics**
 - 2/19 Gridworks to finish and distribute meeting notes
 - 2/19 Gridworks to reduce Working Group email list to CPUC service list plus parties opting in
 - 2/19 IOUs to check feasibility of alternative Tuesday calls and meetings after 3/11 meeting

Resolutions:

- Proposal on Issue 19 from CALSSA team by next meeting on 3/11
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Next Meetings:

- Follow-up Call: February 26th, 1:30 - 3:30pm
- Workshop 2: March 11th, 10am - 4pm, Golden Gate Room, CPUC



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Workshop Agenda		
<i>Start time</i>	<i>Duration</i>	<i>Item</i>
10:00	20 mins	Introductions
10:20	5 mins	Regulatory Updates (introduction)
10:25	35 mins	<p style="text-align: center;">Working Group Basics</p> <ul style="list-style-type: none"> • Scope and schedule • Working Group Three experience and feedback • Approaches and timelines for proposals and commenting <ul style="list-style-type: none"> • Good meeting practices • Role of issue proponents
11:00		<p style="text-align: center;">Issue 18</p> <ul style="list-style-type: none"> • Gridworks issue brief/framing • Presentation from PG&E • Comments from participants
12:00		Lunch
1:00	75 mins	<p style="text-align: center;">Issue 18 (continued)</p> <ul style="list-style-type: none"> • Focused discussion: problem statement • Proponents and proposals development
2:20	70 mins	<p style="text-align: center;">Issue 19</p> <ul style="list-style-type: none"> • Gridworks issue brief/framing • Presentations from CALSSA, Sunpower, Lennar <ul style="list-style-type: none"> • Comments from participants • Focused discussion: problem statement • Proponents and proposals development
3:30		Action items, next call & in-person meeting



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Workshop Notes:

The Workshop presentation can be viewed at this link:

<https://gridworks.org/wp-content/uploads/2020/02/R21-WG4-meeting-sildes-rev-1.pdf>

Below is a brief synopsis of the contents of the presentations and the conversations they inspired.

Working Group basics:

- **Scope and schedule**
 - **Working Groups 2&3**
 - CPUC joint decision on WGs 2&3 will be released this spring
 - **Working Group Meeting Times**
 - Wednesdays not the best for all
 - meetings will take different amounts of time than we expect
 - Mondays and Tuesdays would be the option after March
 - **Working Group 4 Issues**
 - If briefing on latter issues is made available ASAP that gives us the adequate time to prepare
 - propose issue F ASAP and the schedule can be revised
 - Derek Pearson (Artwel) volunteered to be the lead on Issue 29
 - CalSSA - wanted to propose another issue to docket
 - Interconnections for exporting storage sources are currently allowed, but are not eligible for fast track.
 - CalSSA understanding is not clear as to how these sources are treated under Rule 21.
- **Working Group Three experience and feedback**
 - Gridworks should:
 - Not pressure stakeholders to reach agreement,
 - Encourage robust discussion, and make ground for parties to agree or not, but not force it.
 - Focus attention on issues where consensus is possible
 - Clearly identify areas where there is not consensus
- **Approaches and timelines for proposals and commenting**
 - Proponent proposals: 17 BD after issue opened
 - (i.e., Friday before next in-person meeting)
 - Comments on proposals: 9 BD after proposals presented
 - (i.e., Tuesday before call 2 weeks later)



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- Counter proposals (of a substantially new nature): 15 BD after proposals presented
 - (i.e., Wednesday the week before next in-person meeting)
- Comments on Issue Reports (provided by Gridworks after final discussion of each issue):
 - 10 BD for v1, 5 BD for v2, 3 BD for v3
- Comments on Final Report:
 - 10 BD for v1, 5 BD for v2, 5 BD for v3
- **Q: Can we refer to issues by a name instead of a number?**
 - Issue 18: Anti Islanding
 - Issue 19: ZNE
 - Issue 29: Interconnection Safety
 - Issue F: DERMS

Issue 18

“Should the Commission adopt changes to anti islanding screen parameters to reflect research on islanding risks when using UL 1741-certified inverters in order to avoid unnecessary mitigations? If yes, what should those changes entail?”

- **Background and issue framing**
 - Gridworks briefing document with background and issue scoping:
 - <https://gridworks.org/wp-content/uploads/2020/02/R21-Issue-18-briefing-note.pdf>
- **Mike Jensen** - principle Protection Engineer at PG&E
 - Use of UL 1741 and UL 1741SA “Anti-Islanding” capability and certification.
 - Anti Islanding Protection Equipment -
 - DTT (expensive) vs Recloser (cheaper)
 - The current UL 1741/UL 1741SA certification has been shown to be effective at ensuring that multiple inverter installations trip within 2 seconds.
 - IEEE 1547-2018 and Ca Rule 21 table Hh have increased the voltage and frequency windows to allow ride through capability. The latest simulations have indicated unintended islands run-on times have increased but they are still within the 2 second tripping requirement.
 - This has allowed for the rethinking of the DTT requirement resulting in significant reductions in the requirement ; In some cases it is still required.
- **Dr. Michael Ropp**: Developed these standards from the beginning; currently with Sandia
 - The inverter industry has come up with many island detection methods
 - One of the 1547 performance categories is based on California R21



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- Studies have taken place to determine the impact of combinations of inverters & rotating machines on inverters to detect islands
- **Sandia screens** - islanding was almost impossible when screens were employed; worked really well until the trip windows were increased,
- New screens and 8 different anti islanding groups
 - Give us language to talk about anti islanding methods
 - Screens are not yet complete
- **Comments from participants**
 - In the cases where inverters ran on for more than 2 seconds because of nearby machine - do they fail immediately or do they continue as long as machine runs?
 - In general what inverters and RMs do to make islands easier to detect are opposites of each other
 - Different anti islanding techniques and methods
 - DTT used only when there is no other option: imposes burden on all
 - Inverters use multiple methods simultaneously or concurrently
 - Where did the 2 sec delineation come from? Other longer standards?
 - 1547 2003 - 2 anti i times - 2 seconds or before first recloser, though many reclosers are much faster
- **Problem Statement**
 - A proposed list of problem statements is available here:
 - <https://onedrive.live.com/edit.aspx?cid=5891771fba4aff14&page=view&resid=5891771FBA4AFF14!1525&parId=5891771FBA4AFF14!1506&authkey=!AHx9MzGBGYoGkM&app=Word>

Issue 19

Should the Commission adopt streamlined interconnection procedures (e.g. standard configurations eligible for expedited review) to facilitate implementation of California Zero Net Energy building codes and, if so, what should those procedures entail?

- Gridworks briefing document with background and issue scoping:
 - <https://gridworks.org/wp-content/uploads/2020/02/R21-Issue-19-briefing-note.pdf>
- **Presentation from Brad Heavner, Todd Farhat,**
 - **Objective:** Develop interconnection protocols that meet stakeholder needs as efficiently as possible
 - IOUs have different Interconnection application and approval processes for ZNE buildings (all new interconnected homes)
- Initial Recommendations from CALSSA



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1. Builder as the applicant through PTO
 2. No account number or meter number required
 3. New application form and process for all homes in a development to apply at once
 4. Create an API for application submittal
 - PG&E is on board with every point except the API
- **Discussion of presentations**
 - What happens to the transfer of title?
 - For the period of time where the builder owns a building, IOU can operate PTO which is then transferred to new owners
 - Benefits of NEM
 - **Problem Statement**
 - A proposed list of problem statements is available here:
 - <https://onedrive.live.com/edit.aspx?cid=5891771fba4aff14&page=view&resid=5891771FBA4AFF14!1525&parId=5891771FBA4AFF14!1506&authkey=!AHx9MzGBGYoGkM&app=Word>
 - **Proponents and proposal development**
 - Proposal on Issue 19 from CALSSA team by next meeting on 3/11

A note about this Working Group Four email distribution list: We are still using a list that also contains participants from Working Group Three. As of February 21, we will only use a distribution list consisting of the CPUC service list for Interconnection and other parties who have explicitly asked us to be included. To join the CPUC service list for Interconnection, go here:
https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:R1707007



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Meeting Participants:

- Eric Maritnot (Gridworks)
- Rehana Aziz (Gridworks)
- Mac Roche (Gridworks)
- Todd Farhat (SunStreet)
- Roger Salas (SCE)
- Rebecca Davis (GPI)
- Trinity Burruss (Sunworks)
- Sky Stanfield (IREC)
- And Schwartz (Tesla)
- Danielle Weizman (SDG&E)
- Jim Spurgeon (SDG&E)
- Julian Rojas-Ramirez (SCE)
- Catarino Vargas (SDG&E)
- Tim Drew (Public Advocates Office)
- Brian McCollough (CPUC)
- Mazyar Zeinali (X Utility)
- Brad Heavner (CalSSA)
- John Berdner (Enphase)
- Shawnmarie Gonzalez (PG&E)
- Lee Trevino (PG&E)
- Rustom Dessai (PG&E)
- Nadim Virani (PG&E)
- Steve Sherr (Foundation Windpower)
- Sophie Meyer (CPUC - ED)
- Jose Aliaga-Caro (CPUC - ED)
- Ted Howard (Small Business Utility Advocates)
- Mike Jensen (PG&E)
- Max Ernst (PG&E)
- Peter Hamilton
- Peter Klauer (CAISO)
- Kenneth Sahm (Clean Coalition)
- Steve Rymsha (Sunrun)
- Travis Snyder (Ginlong)
- Jean Trenton (Tesla)
- Andrew Young
- Josh McDonald (SCE)
- Matthew Gonzalez (PG&E)
- Bernie
- Byron Washom
- David Brown
- D Weber
- Elise Brancato
- Emily Henry
- Fahad Mukhtar
- Josh Gerber
- Louisa Jones (Sunpower)
- Malcolm Ainspan
- Nery Navarro (SCE)
- Pat Saxton
- Adeel A (CEC)
- Chris Connell
- Greg Kern
- Luis Aguilar (SCE)
- Melissa Reed
- Michelle Pham (Center Point Energy)
- Michael Turner (Sempra)
- Tam Hunt (Ca. Renewable Solutions)
- Rich Scholer
- Tim McDuffie
- Annie Cwiklinski (Tesla)
- Brian Lydic
- Sheikh
- Ellen Struck
- David Brown
- Mary Brown (SCE)
- T Kural
- CEC - Solar Equipment
- Derek Pearson (Artwel)



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