

**Minutes of the December 17, 2021 Interconnection Working Group (IWG) Meeting**

**Attendees:**

*DER Industry/DPS*

<b><u>Name</u></b>	<b><u>Company</u></b>	<b><u>Name</u></b>	<b><u>Company</u></b>
Dhruv Patel	NYSEIA	Katherine Cox Arslan	Boreggo Solar
Gregory Sachs	Empower Solar	Kris Ingebrigtsen	Sunrise Power Solution
Steve Foley	Sunrise Power Solution	Jean Pierre Clejan	GreenLogic
Marjaneh Issapour	Farmingdale State College	Adam Cohen	Centrica
Mark Bruckner	Meltek Inc.	Dan Whitson	Edgewise Energy
Scott Sousa	SUNation	Jeffrey Quackenbush	Integrated Storage Technologies

*PSEG LI/LIPA*

<b><u>Name</u></b>	<b><u>Company</u></b>	<b><u>Name</u></b>	<b><u>Company</u></b>
Anie Philip	PSEG LI	Amrit Singh	PSEG LI
Robert Grassi	PSEG LI	Alex Majeru	PSEG LI
Iram Iqbal	PSEG LI	Mike Heyer	PSEG LI
Curt Dahl	PSEG LI	Ali Akgul	PSEG LI
Louis Aguilar	PSEG LI	Al-Amin Nizu	PSEG LI
Scott Brown	PSEG LI	Dimple Gandhi	PSEG LI
Evan Margolis	PSEG LI	Mike Voltz	PSEG LI
Jalpa Patel	PSEG LI	Tom Muratore	PSEG LI
Rich Inserra	PSEG LI	Reigh Walling	PSEG LI Consultant
Pete Mladinich	LIPA		

## **Introduction**

Mr. Brown opened the meeting by welcoming everyone and conducting a roll call.

## **IWG Compliance Guidelines**

Mr. Grassi reviewed the Compliance Guidelines with participants, including expectations, procedures, policies and topics to avoid which are stated in the compliance document.

### **1. PSEGLI Interconnection Technical Requirement Update**

Mr. Walling presented the Interconnection Technical Requirement (ITR) Update, and paused for questions. Mr. Sachs asked if there would be a shift from feeder level to section level eventually, to which Mr. Walling answered it would stay at feeder level to his knowledge.

Mr. Sachs asked if there were any special takeaways regarding the formula change. Mr. Walling expressed that there would be no difference in most scenarios, but there could be some unique situations where the changes would come into play. Mr. Sachs asked if there would be updates to the CESIR guidelines in the ITR documentation. Mr. Walling said Section 6 of the ITR was a placeholder, and that PSEG LI would be keeping CESIR scopes out of the formal documentation to provide more flexibility. Mr. Iqbal agreed, and offered further clarification on the topic if required. Mr. Sachs said this topic would be revisited during the HCM presentation.

Mr. Clejan asked if Fuel Cells are considered rotating generators or inverter-based systems, to which Mr. Walling answered that they are considered inverter-based.

Ms. Philip asked if Mr. Sachs' inquiry was for more detail on the CESIR study, or for a general understanding on what the studies do. Mr. Sachs said there is a dedicated section in the documentation to be shown later in the meeting, but was just curious if those details would be put in the ITR or kept as a separate document. Mr. Sachs added that understanding how CESIR studies are performed from an engineering standpoint is part of the goal.

### **2. PSEGLI HCM Stage 3**

Mr. Singh presented the Hosting Capacity Maps Stage 3 update slides.

Mr. Sachs asked why energy storage is not involved in the EPRI drive. Mr. Singh explained that this issue is specific to calculating Hosting Capacity associated with batteries in two different scenarios: as generation and as load. Mr. Singh stated that PSEG LI chose not to overlay that information on the maps at this point. Mr. Sachs referred to discussion on this topic in the JU, and asked how it would eventually be integrated into the maps. Mr. Singh said that when ESS information is integrated into the maps, there will most likely be some sort of toggle feature to show/hide that information, or a separate tab containing that information. Ms. Philip said PSEG LI would be aligning with the JU feedback provided by the Industry on this topic.

Regarding the August 2021 Cost Sharing 2.0 order, Mr. Sachs mentioned how upstate utility maps had 90 days to integrate aspects of utility planned upgrades, and asked if PSEG LI would be following suit. Mr. Brown said PSEG LI is actively following that closely, and has an internal working group to assess some of those questions.

Mr. Sachs mentioned the ability to enable downloadable data, and that PSEG LI has labeled it a security concern even though other utilities do not share the same view. Mr. Sachs continued to say that the Industry will continue to inquire on this issue, in relation to the initiatives to analyze the state of the grid.

Mr. Singh and Mr. Sachs briefly discussed bank info in the Hosting Capacity Maps. Mr. Singh explained that clicking on feeders served from the same bank will show the same bank information, which is different than what other utilities have. Mr. Sachs expressed interest in learning more about that architecture.

### **3. PSEGLI CESIR Analysis Details Request**

Mr. Walling presented the CESIR Analysis Details Request slides.

Mr. Sachs asked what the current PSEG LI limitations are in terms of the amount of back-feed allowed on the transmission system. Mr. Walling spoke about the 80% penetration ratio, and how rotating generators play a role in this scenario. Mr. Walling discussed 3V0 protection on a substation, as well as transformer thermal limits. Mr. Walling concluded by saying that 80% penetration ratio is enough to cause a 3V0 condition, but does not necessarily mean there is back-feed.

Mr. Sachs inquired regarding the slide on IEEE 1547-2018, which requires larger DER (exporting > 500 kW) to achieve compliance at the Point of Common Coupling. Mr. Sachs asked how exactly that compliance would be verified. Mr. Walling said it would most likely come from a consult verification, and a PE stamp would probably be necessary. Mr. Sachs questioned what the job description would need to be if they were to hire an engineer to do this sort of work.

Mr. Sachs mentioned how they track the CESIR fail data in the JU, and how the equivalent in PSEG LI territory would be tracking screen fail data. Mr. Walling said CESIR studies should not usually fail, and what is required to accommodate a system normally results in an upgrade. Mr. Walling continued to say that if the upgrade is to replace a substation transformer bank, then that is practically a “failure” considering the economic feasibility of a project. Mr. Walling explained that if an upgrade is required, a developer will incur cost, and if it is too expensive then the project might not move forward. Mr. Sachs concluded by saying that upstate utilities have a pass/fail system, whereas PSEG LI is based more on screens.

### **4. Industry Hosting Capacity Limitations Overview**

Mr. Sachs presented the Industry Hosting Capacity Limitation Overview slides.

Mr. Sachs recalled that PSEG LI said SCADA would start to become more frequently required. Mr. Sachs posed an open question regarding a conversation at JU about how Hosting Capacity would be impacted in the event of the loss of a transformer bank, and asked if there was a place for the Industry to find a list of technical limitations/how those limitations manifest in the ITR. Mr. Walling stated that load masking was not included, and there is no separate limitation for it. Ms. Philip added that EPRI drive is trying to capture what DER can be connected at a high level.

Mr. Sachs spoke about the way the Industry thinks of CESIR analyses in the context of HC, and that CESIR analyses are effectively defining the amount of capacity that can be connected to the feeder. Ms. Philip said that this depends on the nature of the project, such as the possibility of transformer loss and the

size of the DER, among other things. Mr. Sachs emphasized that they were not seeking an immediate answer, and that it could be left as an open question. Ms. Philip added that contingency analysis is part of load-flow analysis. Mr. Sachs said the current goal is to pose multiple questions.

Mr. Sachs discussed the latest Utility 2.0 Filing, and asked if PSEG LI has any pilot programs that enable dynamic control of DER. Mr. Sachs continued to say that at some point on any given substation, regardless of nameplate capacity, DER will be limited, and active curtailment will be the primary solution to connect more DER to a circuit. Mr. Sachs asked if PSEG LI believes these solutions are needed in order to achieve the 2025 and 2030 CLCPA goals. Mr. Singh said there is a learning curve with operators in terms of being accustomed with new software. Mr. Singh added that PSEG LI has received recommendations from DPS which will be reviewed (regarding Hosting Capacity), and will be able provide more information to the Industry in time.

Mr. Sachs moved on in the presentation to the Power Grid study questions. Mr. Sachs asked whether PSEG LI had incorporated hypothetical maximum and daytime loading in back-feed scenarios, mentioning that CESIR analysis might cause limitations as well. Mr. Sachs also asked if PSEG LI has a technical paper published by EPRI, in order to better understand how some values regarding HC are calculated. Mr. Singh said that there are technical papers out there by the EPRI drive team, but not in great detail. Mr. Singh continued, saying that Ultimate Max provides the maximum capacity that can be accommodated on a bank, and if that number is exceeded then a bank upgrade will be triggered. Mr. Singh added that minimum daytime load is included in Ultimate Max calculations.

Mr. Sachs asked about substation back-feeding and Ultimate Max. Ms. Philip said that Ultimate Max is not limited to the 80% penetration ratio. Mr. Singh agreed, and said PSEG LI looks at minimum daytime load or minimum load, and the amount of DER already connected to come up with a net load number.

## **5. Industry IEEE 1547-2018**

Mr. Sachs presented the IEEE 1547-2018 Adoption document, including follow up questions & Smart Inverters setting verification procedures.

Mr. Sachs asked how the set points of the inverter will be verified, and if PSEG LI would require screenshots as part of the commissioning process. Mr. Sachs emphasized that a response was not needed in the moment, but that it is a topic to think about. Ms. Philip thanked Mr. Sachs for his presentation and input.

## **6. Meeting Dates for 2022**

Mr. Brown presented four potential dates for 2022's IWG meetings, and said PSEG LI would work with Mr. Sachs and Mr. Patel to solidify these dates. Mr. Sachs said the Industry would like to align with the JU in terms of how often they meet, proposing more dates or increased meeting durations. Mr. Brown and Ms. Philip concurred that PSEG LI would take those considerations back for further review.

Ms. Philip paused for final comments and questions, thanked everyone for attending, and adjourned the meeting.

## **Meeting Adjourned**