

**Minutes**  
**Electrical Power Working Group**  
16 October 2020

**Meeting chairperson:** Mitch Hefter

**Recording secretaries:** Richard Nix & Karl Ruling; ESTA

**Members attending:**

Justin Bennett; University of the Incarnate Word; P; U  
Steve Brock; Guardian Entertainment Inc; P; DR  
Don Earl; Earl Girls, Inc.; P; DR  
Nehad El-Sherif; Nehad El-Sherif; I; G  
Jerry Gorrell; Theatre Safety Programs; P; U  
Mike Harwood; William F. White International; O; DR  
Mitch Hefter; USITT; P; U  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Hans Lau; I.A.T.S.E. Local 728; A; U  
Michael Lay; Candela Controls, Inc; P; G  
Rick Montgomery; Motion Laboratories, Inc.; A; MP  
Elizabeth E. (Lizz) Pittsley; Elizabeth Pittsley; P; U  
Jason Potterf; Cisco; P; MP  
Alan M. Rowe; I.A.T.S.E. Local 728; A; U  
Wendy Russell; Electronic Theatre Controls, Inc; A; MP  
Mike Skinner; Contract Services Administration Trust Fund; P; U  
Steve Terry; Electronic Theatre Controls, Inc.; P; MP  
Stephen Vanciel; IATSE Local 631; P; U  
Art Wanuch; Entertainment Electrical Safety Association; P; G  
Mike Webb; Motion Laboratories, Inc.; P; MP  
Keith S. Woods; IATSE Local 891; P; U

**1 Opening remarks**

Mitch Hefter called the meeting to order at 14:03. He wished all a good morning or good afternoon. He introduced himself, and said that his co-chair, Justin Bennett, was double-booked with classes, so he, Mitch Hefter, will be running the meeting. Bennett will join as he can when he can.

Hefter also reminded everyone to mute their microphones when not speaking, and to use the WebEx User panel to raise hands for voting.

**2 Patent and anti-trust statements**

**2.1 Reading of the anti-trust statement**

The following statement was read aloud to the assembly by Mitch Hefter:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at an ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

Karl Ruling held a copy of the easy-to-read pamphlet in front of his webcam so it could be seen by meeting attendees. No anti-trust concerns were raised.

## 2.2 Reading of the call for patents

The following statement was read aloud to the assembly by Mitch Hefter:

ESTA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. ESTA uses a process of open patent and copyright disclosures to implement its intent. ESTA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

Nothing was revealed.

## 3 Attendance and Membership

### 3.1 Requirements for membership

The following statement was read aloud to the assembly by Mitch Hefter:

Membership is open to all parties who are affected by the work of the group; membership in ESTA is not a requirement, but there is a \$100/person/year participation fee to help fund the costs of running the Technical Standards Program. Voting members are required to attend meetings and vote on letter ballots. Any principal member and alternate that both miss three consecutive meetings or letter ballots will have their membership status changed to observer. This action will be taken at the beginning of the first meeting after such inaction and will be recorded in the minutes of that meeting.

### 3.2 Introduction of attendees and taking attendance.

Mitch Hefter called on the participants shown on the WebEx screen and asked them to introduce themselves.

### 3.3 Determination of quorum

Richard Nix said that more than 50% of the voting body was present, enough to pass a motion needing a supermajority vote.

### 3.4 Processing of new and other membership requests

There was one new application:

Steve Brock; Guardian Shock Protection (Guardian Entertainment Inc.); Principal; Dealer/Rental company

Keith Woods moved to accept Brock's application. The motion was seconded. There was no opposition and no abstentions. The motion carried.

### 3.5 Changes to observer status due to lack of participation

Richard Nix noted that Nick Holmberg has resigned from the TSP. He had represented PSAV. That company now has no representation.

### 3.6 Consensus body during the meeting

Delegate	Representing	Voting status	Int. cat.
George Long	Aggreko	P	DR
Michael Lay	Candela Controls, Inc.	P	DR
Jason Potterf	Cisco	P	MP
Mike Skinner	Contract Services Administration Trust Fund	P	U
Matthew Antonucci	Contract Services Administration Trust Fund	A	U

Delegate	Representing	Voting status	Int. cat.
Chris Moulton	Contract Services Administration Trust Fund	A	U
Don Earl	Earl Girls, Inc.	P	DR
Steve Terry	Electronic Theatre Controls, Inc.	P	MP
Wendy Russell	Electronic Theatre Controls, Inc	A	MP
Lizz Pitsley	Elizabeth Pitsley	P	U
Art Wanuch	Entertainment Electrical Safety Association	P	G
Ian Foulds	Entertainment Electrical Safety Association	A	G
Steve Brock	Guardian Entertainment Inc.	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Charles McIntyre	I.A.T.S.E. Local 728	P	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Hans Lau	I.A.T.S.E. Local 728	A	U
Kevin Amick	IATSE Local 479	P	G
John (JA) Byerly	IATSE Local 479	A	G
Stephen Vanciel	IATSE Local 631	P	U
Keith S. Woods	IATSE Local 891	P	U
Simon Hunt	IATSE Local 891	A	U
Ken Wagner	Ken Wagner	I	U
Bob Luther	Lex TM3	P	MP
John Valus Jr.	Lex TM3	A	MP
Mike Webb	Motion Laboratories, Inc.	P	MP
Rick Montgomery	Motion Laboratories, Inc.	A	MP
Michael Shaw	Motion Laboratories, Inc.	A	MP
Nehad El-Sherif	Nehad El-Sherif	I	G
Jerry Gorrell	Theatre Safety Programs	P	U
Robert Haycock	UC Berkeley	I	U
Justin Bennett	University of the Incarnate Word	P	U
Mitch Hefter	USITT	P	U
	<b>TOTAL</b>	<b>22</b>	
		0	CP
		0	DE
	Subtotals by interest categories	3	DR
		4	G
		4	MP
		11	U

**Key to codes:**

P	Principal voter	CP	Custom-market producer
A	Alternate voter	DE	Designer
I	Individual voter	DR	Dealer/Rental company
		G	General interest
		MP	Mass-market producer
		U	User

**4 Approval of the minutes from the previous meeting**

See *EPmin07-2020\_DRAFT.pdf*.

Eddie Kramer moved that the draft minutes be accepted as written. The motion was seconded. The motion was approved unanimously.

**5 Approval of agenda**

Hefter added a discussion of the Volunteer of the Year Award and an NEC update to the agenda.

Don Earl moved that the modified agenda be accepted. The motion was seconded. The motion carried.

**6 Old business****6.1 ANSI E1.16 – 2002 (R2017) Entertainment Technology – Configuration Standard for Metal Halide Ballast Power Cables**

*Revision, reaffirmation, or withdrawal by 18 May 2022*

No news or action.

**6.2 BSR E1.19, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry** (Revision of the 2015 edition)

*Task group: Justin Bennett, one representative from Lex (Bob Luther or John Valus Jr.), Ian Foulds, Nehad El Sherif, Mike Skinner, one representative from I.A.T.S.E. Local 728 (Alan Rowe), and one representative from I.A.T.S.E. Local 891 (Keith Woods or Simon Hunt).*

See revised draft *BSR\_E1-19-20xx\_r20.pdf*.

Justin Bennett reported. He outlined the changes, which had been highlighted in the text. The major changes included clarification that the standard's scope only addresses Class A devices. They added definitions for "wet location" and "proximity to water"; added recommendations about response time; made various editorial changes, including stating that GFCI dimmers no longer exist and adding informational notes; added some portable cord requirements based on NEC requirements, and clarification that not all portable cords require GFCI outlets.

He asked if there were any questions. Steve Vanciel asked about tools not needing to be protected, because he has seen many power tools with GFCI's built into the cordset, and wondered how that worked. Justin Bennett replied that they had not considered this type of situation. Steve Vanciel asked about what happens when you plug a cord with a GFCI into a GFCI outlet. Steve Brock says his company has a GFCI fed from a GFCI on a regular basis.

Steve Brock also said that his company has a GFCI that will work with dimmers. This led to a discussion of the changes that had been made to 4.1.1.1 and that they are not congruent with the existence of Brock's company's products. Justin Bennett said that the draft had been revised to say that GFCI dimmers are no longer available, but that the wording could be changed to say "not readily available." Steve Terry asked if there were other manufacturers who made these devices. Steve Brock said that Littelfuse Shock-Block is also such a device, but that it was not available in ratings less than 100 amperes.

There was discussion about the meaning of "not readily available." Karl Ruling pointed out that the wording is in an informational note, and suggested deleting the wording. Steve Terry agreed that there is a potential issue with an assumption that the devices do not exist, or are not available. He suggested that the task group resolve this

issue. Justin Bennett reiterated that the informational note used to be normative, minimizing the potential effect of misinformation. Steve Terry said that we've discovered that the informational note contains misinformation, suggesting that misinformation should not be in the document.

Steve Terry also said he did not like the term "self-dimming fixture," and asked the task group to also revise that wording.

Mitch Hefter noted that the discussion indicates more task group work, and instructed the task group to return with revisions in January. He appointed Steve Brock to the task group.

### **6.3 ANSI E1.24 – 2012 (R2017), pin connectors**

*Revision, reaffirmation, or withdrawal by 23 February 2022*

No news or action.

### **6.4 ANSI E1.32 – 2012 (R2017), Guide for the Inspection of Entertainment Industry Incandescent Lamp Luminaires**

*Revision, reaffirmation, or withdrawal by 15 September 2022*

No news or action.

### **6.5 ANSI E1.51 – 2018, The Selection, Installation, and Use of Single-Conductor Portable Power Feeder Cable Systems for Use At 600 Volts Nominal or Less for the Distribution of Electrical Energy in the Television, Film, Live Performance and Event Industries in Canada**

*Revision, reaffirmation, or withdrawal by 7 November 2023*

No news or action.

### **6.6 ANSI E1.53 – 2019, Overhead mounting of luminaires, lighting accessories, and other portable devices: specification and practice**

*Revision, reaffirmation, or withdrawal by 3 June 2024)*

No news or action.

### **6.7 ANSI E1.58 – 2017, Indoor equipment outdoors**

*Reaffirmation, revision, or withdrawal by 11 October 2022*

Terry noted that there are now proposals for places in Articles 520 and 530 in the 2023 NEC where E1.58 is to be referenced.

### **6.8 BSR E1.65, Recommended practice for the periodic inspection, testing, and maintenance of Electrical and Electronic equipment used in the entertainment and live event industries**

*No leader. Project paused. Task group:*

- *Eddie Kramer,*
- *George Long,*
- *Justin Bennett,*
- *Keith Woods,*
- *Larry Schoeneman,*
- *Michael Harwood,*
- *Mike Skinner.*
- *Mitch Hefter,*
- *Robert Haycock,*
- *Steve Vanciel, and*
- *Wendy Russell*

No news or action. No one stepped forward to lead this project.

### **6.9 Recommended Practices for Avoiding Shock and Electrocutation**

*From the minutes of the March meeting:*

*Karl Ruling asked if the EPWG would be willing to direct Robert Haycock to contact Keith Sklar for further discussion, and to determine if the current ESWG projects already cover these issues.*

*Bob Luther moved to so direct Robert Haycock in this action, further asking for a followup report at the next EPWG meeting. Mitch Hefter and Justin Bennett also will report this action to the TSC. The motion was seconded and carried with no objections or abstentions.*

*From the minutes of the July meeting:*

*Robert Haycock was not present. Richard Nix reported that indeed in the ESWG the topic was discussed and Haycock was to reach out to Sklar.*

Haycock was not present. Richard Nix said he has no updates, but that it has been discussed in the ESWG. Mitch Hefter asked Richard Nix to follow up with Robert Haycock on this.

The EPWG's consensus was that we need to move forward on this, but it is not clear how.

## **7 New business**

## **8 Other business and announcements**

### **8.1 Above & Beyond Awards**

Mitch Hefter reported that Michael Lay has encouraged people to nominate someone for the Above & Beyond Award. The website is at [http://tsp.esta.org/tsp/news/award\\_recipients.html](http://tsp.esta.org/tsp/news/award_recipients.html).

Alan Rowe noted the passing a year ago of Roger Lattin, a previous winner. He is missed.

### **8.2 Volunteer of the Year Award**

Mitch Hefter pointed out the Volunteer of the Year Award. The nomination process is different from the Above & Beyond Award. With this award, you nominate people by sending an email by 19 November to Frances Thompson.

### **8.3 IES report**

Mitch Hefter reported on the IES on-line library, which will be accessible by subscription and is coming soon!

### **8.4 NEC report**

Mitch Hefter gave a summary of the NEC technical committee meeting schedule and some of the some of the changes that have proposed. There have been some notable changes proposed regarding PoE and emergency lighting. Important for our industry is complete rewrite of Article 530, a project led by Alan Rowe and Mike Skinner.

Hefter also mentioned that there is a directive from the Correlating Committee to place article-specific definitions in Article 100, rather than in their relevant articles. This way the user will find all the definitions for the entire NEC in one article, but with notes identifying which subsequent Articles use specific defined terms.

Steve Terry foresees issues with this, and it may not happen. Terry said that the technical committee can refuse to make the change, and perhaps be overruled by the Correlating Committee. Then it could result in a NITMAM at the final meeting. He said that the argument for lumping all the definitions together is that this is the format used in most of the other NFPA documents, and the NFPA documents should all look the same.

Eddie Kramer said that if it isn't put into this next NEC, the Correlating Committee will re-introduce it in the following edition. The CC will keep at it until they get their way.

There was a discussion of the NFPA process, what constitutes "the consensus body," and who gets the final say.

Jason Potterf reported that Code Panel 15 wants to limit what devices can be reconditioned, but NEMA has introduced wording to expand acceptable luminaires and lampholders to include refurbished devices. He asked if anyone had any concerns with this. There were no concerns expressed.

### **8.5 Other other business**

None.

### **9 Schedule for future meetings**

The meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>.

Hefter said that we don't have a meeting scheduled there yet, but he anticipates a virtual meeting in January.

Hefter also reported that he had received an email in the last few minutes (during this meeting) saying that the USITT 2021 Conference and Stage Expo will be virtual, not face-to-face. He said it will not be just a collection of Zoom meetings, but something very interesting.

### **10 Adjournment**

Don Earl moved we adjourn. The motion was seconded. The agenda having been completed and hearing no objections, Mitch Hefter declared the meeting adjourned at 15:12.

Electrical Power Working Group Members as of 3 November 2020

<b>Delegate</b>	<b>Company</b>	<b>Representing</b>	<b>Voting status</b>	<b>Int. cat.</b>
Kevin Amick	IATSE Local 479	IATSE Local 479	P	G
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	A	U
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Alyxzander Bear	Insomniac	Insomniac	O	DE
Justin Bennett	University of the Incarnate Word	University of the Incarnate Word	P	U
Steve Brock	Guardian Shock Protection	Guardian Entertainment Inc	P	DR
John (JA) Byerly	IATSE Local 479	IATSE Local 479	A	G
Richard Cadena	Academy of Production Technology	Academy of Production Technology	O	G
James Davey	AC Power Distribution Inc.	A.C.T. Lighting, Inc.	O	CP
Jeremy Day	Lumenpulse Lighting Inc.	Lumenpulse Group	O	MP
Rodger Dean	R. Dean Lighting Limited	R. Dean Lighting Limited	O	DR
Jim Digby	Event Safety Alliance	Event Safety Alliance	O	U
Marsha DuBois	Pintech Stage Connectors, Inc.	Pintech Stage Connectors, Inc.	O	CP
James Eade	ABTT	ABTT	O	G
Don Earl	Earl Girls, Inc.	Earl Girls, Inc.	P	DR
Nehad El-Sherif	Nehad El-Sherif	Nehad El-Sherif	I	G
Trevor Forrest	Helvar Lighting Control	Helvar Lighting Control	O	MP
Ian Foulds	IATSE Local 873	Entertainment Electrical Safety Association	A	G
Mike Garl	Mike Garl Consulting LLC	Mike Garl Consulting LLC	exf	
Jerry Gorrell	Theatre Safety Programs	Theatre Safety Programs	P	U
Erin Grabe	ESTA	ESTA	exf	G
Mike Harwood	William F. White International	William F. White International	O	DR
Robert Haycock	Cal Performances	UC Berkeley	I	U



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<b>Delegate</b>	<b>Company</b>	<b>Representing</b>	<b>Voting status</b>	<b>Int. cat.</b>
Mitch Hefter	Mitch Hefter	USITT	P	U
Simon Hunt	IATSE Local 891	IATSE Local 891	A	U
John Valus Jr.	LEX Products	Lex TM3	A	MP
Jerald Kraft	JTH Lighting Alliance	JTH Lighting Alliance	O	G
Edwin S. Kramer	I.A.T.S.E. Local 1	I.A.T.S.E. Local 1	P	U
Charles (Chuck) Kurten	Underwriters Laboratories, Inc.	Underwriters Laboratories, Inc.	O	G
Hans Lau	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	A	U
Michael Lay	Candela Controls, Inc	Candela Controls, Inc	P	G
George Long	Aggreko Event Services	Aggreko	P	DR
Bob Luther	Lex Products	Lex TM3	P	MP
Charles McIntyre	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Ty Mellon	Tyron J Mellon, Jr.	Tyron J Mellon, Jr.	O	G
Rick Montgomery	Motion Laboratories, Inc.	Motion Laboratories, Inc.	A	MP
Chris Moulton	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	A	U
Richard J. Nix	ESTA	ESTA	exf	G
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	Elizabeth Pittsley	P	U
Jason Potterf	Cisco	Cisco	P	MP
Alan M. Rowe	IATSE Local 728	I.A.T.S.E. Local 728	A	U
Karl G. Ruling	ESTA	ESTA	exf	G
Wendy Russell	Electronic Theatre Controls, Inc	Electronic Theatre Controls, Inc	A	MP
Larry Schoeneman	Larry Schoeneman	Larry Schoeneman	O	G
Ford Sellers	Chauvet Lighting	Chauvet Lighting	O	MP

Electrical Power Working Group Members as of 3 November 2020

Delegate	Company	Representing	Voting status	Int. cat.
Michael Shaw	Motion Laboratories, Inc.	Motion Laboratories, Inc.	A	MP
Mike Skinner	Alliance of Motion Picture and Television Producers	Contract Services Administration Trust Fund	P	U
Jonny Starr	TMB	TMB	O	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Robert Timmerman	Philips Color Kinetics	Signify	O	MP
Stephen Vanciel	IATSE Local 631	IATSE Local 631	P	U
Ken Wagner	Ken Wagner	Ken Wagner	I	U
Art Wanuch	Entertainment Electrical Safety Association	Entertainment Electrical Safety Association	P	G
Colin Waters	TMB	TMB	O	DR
Mike Webb	Motion Laboratories, Inc.	Motion Laboratories, Inc.	P	MP
Keith S. Woods	Lakhri Impressions Ltd.	IATSE Local 891	P	U
Jeong Sik Yoo	Ghost LX	Ghost LX	O	DE

**Key to codes:**

P	Principal voter	CP	Custom-market producer
A	Alternate voter	DE	Designer
I	Individual voter	DR	Dealer/Rental company
O	Observer	G	General interest
exf	Ex Officio (staff)	MP	Mass-market producer
		U	User