

**Minutes**  
**Electrical Power Working Group**  
Friday 20 July 2018  
D/FW Marriott Solana  
Westlake, TX

**Presiding chairperson:** Mitch Hefter; USITT; P; U

**Recording secretaries:** Karl Ruling, Erin Grabe, and Richard Nix; ESTA

**Members in attendance:**

Kevin Amick; IATSE Local 479; P; G  
Matthew Antonucci; Contract Services Administration Trust Fund; P; U  
Justin Bennett; University of the Incarnate Word; P; U  
James Davey; A.C.T. Lighting, Inc.; P; CP  
Rodger Dean; R. Dean Lighting Limited; P; DR  
Don Earl; Earl Girls, Inc.; P; DR  
Nehad El-Sherif; Nehad El-Sherif; I; G  
Jerry Gorrell; Theatre Safety Programs; P; U  
Robert Haycock; UC Berkeley; I; U  
John Valus, Jr.; Lex TM3; A; MP  
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U  
Roger Lattin; I.A.T.S.E. Local 728; P; U  
Michael Lay; Signify; P; MP  
George Long; Aggreko; P; DR  
Bob Luther; Lex TM3; P; MP  
Jason Potterf; Cisco; P; MP  
Alan M. Rowe; I.A.T.S.E. Local 728; A; U  
Larry Schoeneman; DesignLab Chicago, Inc.; P; DR  
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

**Visitors:**

Mike Garl; Mike Garl Consulting; TSC Co-chair  
Edward Condit; Osram Lighting Solutions

**1 Opening remarks**

Mitch Hefter called the meeting to order at 9:05 a.m., reminding everyone to silence their cell phones, and asking the online attendees to mute their microphones when not speaking,

**1.1 Welcome and other remarks**

Mitch welcomed everyone to Texas, mentioning the extreme heat and advising those brave enough to venture out about the benefits of hydration.

**1.2 Working group leadership**

Being approved by letter ballot, the Technical Standards Council appointed Justin Bennett as co-chair of the EPWG, alongside Mitch Hefter. Mitch welcomed him.

**2 Attendance and membership**

Karl Ruling showed everyone the pink sign in sheet, which was then passed around the room. The secretaries noted those people attending on-line via the WebEx session details file.

## 2.1 Introduction of those present and taking attendance

Everyone introduced themselves.

## 2.2 Determination of quorum

*There are currently 21 votes possible. A quorum is 7; supermajority is 11.*

A poll of the group revealed fifteen voting members in the room, in addition to those online, so a supermajority was present.

## 2.3 Recognition of alternate voting members

All alternate voting members were recognized, noting that there were representatives who had both Principal and Alternate voting members present.

## 2.4 Requirements for membership

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

Membership is open to all who are affected by the work of the group. Voters who would be in the designer or dealer/rental company interest category in particular are encouraged to become members. There is an annual \$100 participation fee for all members. Voting members are required to attend meetings and to vote on letter ballots. Voting members and their alternates may not miss three consecutive meetings or three consecutive letter ballots without a loss of voting status.

## 2.5 Changes to observer status

*The following voters have missed the last two meetings and are in jeopardy of a change to Observer status if this meeting is also missed:*

James Davey; AC Power Distribution Inc.; A.C.T. Lighting, Inc.; P; CP  
Kevin Amick; IATSE Local 479; P; G  
Larry Schoeneman; DesignLab Chicago, Inc.; P; DR

No action; all three individuals were present at this meeting.

## 2.6 Processing of new and other membership requests

*As of 20 June 2018, the following new applications or status change requests have been received:*

Michael Lay; Signify; P; MP (Change of parent company name)  
John (JA) Byerly; IATSE Local 479; A; U  
Jason Potterf; Cisco; P; MP

Roger Dean requested that his status be changed from Observer to Principal. His absence at the last meeting had caused his WG application for voting status to be approved as an observer.

Steve Terry moved, and it was seconded to approve the requested applications and changes to status. The motion carried with no objections.

## 2.7 Consensus body

Delegate	Representing	Voting status	Int. cat.
James Davey	A.C.T. Lighting, Inc.	P	CP
George Long	Aggreko	P	DR
Robert Haycock	UC Berkeley	I	U
Jason Potterf	Cisco	P	MP
Matthew Antonucci	Contract Services Administration Trust Fund	P	U
Chris Moulton	Contract Services Administration Trust Fund	A	U

Delegate	Representing	Voting status	Int. cat.
Larry Schoeneman	DesignLab Chicago, Inc.	P	DR
Don Earl	Earl Girls, Inc.	P	DR
Steve Terry	Electronic Theatre Controls, Inc.	P	MP
Art Wanuch	Entertainment Electrical Safety Association	P	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Roger Lattin	I.A.T.S.E. Local 728	P	U
Charles McIntyre	I.A.T.S.E. Local 728	A	U
Kevin Amick	IATSE Local 479	P	G
John (JA) Byerly	IATSE Local 479	A	U
Stephen Vanciel	IATSE Local 631	P	U
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Ian Foulds	Entertainment Electrical Safety Association	A	G
Simon Hunt	IATSE Local 891	A	U
Keith S. Woods	IATSE Local 891	P	U
Bob Luther	Lex TM3	P	MP
John Valus, Jr.	Lex TM3	A	MP
Mitch Hefter	USITT	P	U
Mike Webb	Motion Laboratories, Inc.	P	MP
Rick Montgomery	Motion Laboratories, Inc.	A	MP
Nehad El-Sherif	Nehad El-Sherif	I	G
Rodger Dean	R. Dean Lighting Limited	P	DR
Michael Lay	Signify	P	MP
Jerry Gorrell	Theatre Safety Programs	P	U
Ty Mellon	Tyron J Mellon, Jr.	I	G
Justin Bennett	University of the Incarnate Word	P	U
	<b>Total votes possible</b>	<b>23</b>	
	Votes by interest categories	1	CP
		0	DE
		4	DR
		4	G
		5	MP
		9	U

**3 Approval of the minutes from the previous meeting**  
See *EPmin03-2018.pdf*.

A motion to accept the minutes as written was made by Steve Terry. It was seconded and approved by unanimous vote.

#### **4 Reading of the call for patents**

The following statement was read aloud to the assembly by Justin Bennett:

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 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 in response to the call for patents.

#### **5 Reading of the anti-trust statement**

The following statement was read aloud to the assembly by Justin Bennett:

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 up copies of the easy-to-read pamphlet, which is available to anyone upon request. No anti-trust concerns were brought to the attention of the assembly.

#### **6 Approval of agenda**

Steve Vanciel requested a new item regarding possible outreach to electrical inspectors.

Steve Terry made a motion to approve the agenda as amended. The motion was seconded and approved by unanimous vote

#### **7 Old business - task group reports**

##### **7.1 ANSI E1.16 – 2002 (R2017) Entertainment Technology – Configuration Standard for Metal Halide Ballast Power Cables** (Revision, reaffirmation, or withdrawal by 18 May 2022)

There was nothing to report at this time. No action.

##### **7.2 ANSI E1.19 – 2015, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry** (Revision, reaffirmation, or withdrawal by 11 February 2020)

*At the March meeting, Roger Lattin said that UL 943 may have been revised, and wondered if anyone has an idea of the changes.*

Steve Terry reported that he reviewed the updated version and found nothing of note to report.

##### **7.3 ANSI E1.24 – 2012 (R2017), pin connectors** (Revision, reaffirmation, or withdrawal by 23 February 2022)

There was nothing to report. No action.

##### **7.4 ANSI E1.32 – 2012 (R2017), Guide for the Inspection of Entertainment Industry Incandescent Lamp Luminaires** (Revision, reaffirmation, or withdrawal by 15 September 2022)

There was nothing to report. No action.

## **7.5 BSR E1.51, A Canadian E1.18**

*See EPWG\_LtrBallotRecircSummaryAcptE1-51.pdf. The working group letter ballot to approve BSR E1.51 passed with the required supermajority approval—the affirmation vote of more than two-thirds of those who voted, excluding abstentions, and more than fifty percent of the total voting body, including abstentions. However, four No votes with reasons were received and should be discussed to see if resolution is possible.*

Steve Terry began the discussion about the letter ballot, noting that we have no mechanism to change a vote based on who the voters were. He said that we should move forward with approving it on the merits of its clear supermajority vote. Alan Rowe argued against this proposed action, with intent to have a thorough discussion about the merits of the minority votes.

Considerable discussion ensued representing both sides of the topic, which centered around a supposition that the draft document may not be recognized by those who use the Canadian Electrical Code as a basis for their work, however it was noted that the Canadian Electrical Code does not address some of the issues specific to the entertainment industry that are addressed in this draft standard.

Alan Rowe stated that he thought the document was technically sound, and asked if it is possible to make the document specific to Ontario.

Eddie Kramer followed this question by stating that the draft is an American standard, which should not be imposed on Canadians. Jerry Gorrell noted that this document imposes nothing on anybody, because compliance is voluntary.

Noting that the document's title and scope specifically used wording making it specific to Canada, the consensus of this discussion was that it could not be, nor was it intended to be, specific to one area or jurisdiction in Canada. It was further noted that the standard was first suggested by someone actively involved in development of the Canadian Electrical Code, in order to help provide consistent guidance, specific to the entertainment industry, where the Canadian Electrical Code is lacking, or is unclear.

Part of the discussion also addressed one of the dissenting vote commentaries, which argued that the absence of public review comments from a wide geographical distribution across Canada's provinces perhaps indicated that the document was inconsequential in those areas. Karl Ruling noted that neither ESTA's nor ANSI's policies and procedures require geographic representation or geographically diverse public review responses, which might in fact be practicably impossible to satisfy. Roger Dean then noted that people have had ample opportunities to comment, if they wished, during the seven public reviews. He described the outreach that had been done, including sending copies to all the IA local offices.

It was then noted that this is a voluntary standard, so those choosing not to use it could do so at their own discretion, meanwhile it would be a useful resource for those who wanted to use it. Keith Woods stated that the technical content of the document is fine, but his Local 891 will ignore the document and will refer to the Canadian Electrical Code alone.

Concluding the discussion, Roger Dean moved to reject the negative vote reasons as unresolvable. The motion was seconded, and carried by supermajority with a show of hands. There were two objections and one abstention.

## **7.6 ANSI E1.58 – 2017, – Indoor equipment outdoors (Reaffirmation, revision, or withdrawal by 11 October 2022)**

Erin Grabe reported that the document has been downloaded 111 times.

## **7.7 Electrical inspection project**

Eddie Kramer reported on the history of how the request came to the EPWG, and became a formal request. It was noted that this request is on the TSC's agenda, two days hence from today, and that both the working group and the TSC must approve the request in order to make it a formal project.

Steve Terry moved to accept the project, it was seconded and passed by unanimous acclamation of the members present. Eddie Kramer will chair the task group, Roger Lattin, George Long, Keith Woods, Robert Haycock, Steve Terry, Steve Vanciel were appointed to the new task group.

The update will be given to the TSC. Upon the TSC's approval, a PINS form will be filed with ANSI for BSR E1.65-201X

### **7.8 Multiconductor cable research project**

John Valus and Steve Terry both gave reports on the project group's findings, which indicate that there are currently insurmountable connector intermatibility issues within the industry. The same connectors are used across a range of voltages, with no pin assignments or other identification methods to validate voltage and phasing configuration, thus allowing the potential for interconnection between 120 V and 208 V wiring systems, which UL would not accept.

Steve Terry moved to defer the project due to currently insurmountable technical issues, with the option to revisit it at a future date. The working group agreed by acclamation to do so; there were no objections.

## **8 New business**

### **8.1 ANSI E1.53 – 2016, Overhead mounting of luminaires, lighting accessories, and other portable devices: specification and practice**

*The current standard requires specific words to indicate the maximum intended load of rated mounting devices; "SWL" and WLL" are not among them. It has been suggested that more flexibility in labeling would be good. See E1-53-201x.pdf for a draft version with new language added. Would the working group like to open this document for revision to incorporate this language?*

Steve Terry moved to open the document up for revision to address the items noted, then put the revision out for public review. Discussion revealed that the clauses for environmental suitability should be moved into an exclusive section. This revision was made to the draft already distributed to the working group. The motion carried by unanimous vote. A PINS will be filed with ANSI, and the draft will be forwarded to the TSC for approval of the public review.

### **8.2 Other new business**

Discussion about how to establish or improve outreach to inspectors.

Steve Vanciel made a statement about the importance of outreach to electrical inspectors, arising out of a situation where an inspector asked that all portable lighting equipment be permanently wired. He posed the question, is there a way to address this type of outreach on a broad scale.

No motion was offered. Mitch Hefter offered to send an inquiry to fellow NEC Code Panel 15 members, whom he knew also worked with the International Association of Electrical Inspectors (IAEI) organization, and invite them to participate in the new electrical inspection project.

## **9 Other business and announcements**

### **9.1 Education**

#### **9.1.1 INNOVA**

*USITT and ESTA have partnered up to bring you INNOVA, an online learning platform for the entertainment technology industry. Check it out at <http://innova.usitt.org>. Content and content providers are being sought. If you are interested, email [standards@esta.org](mailto:standards@esta.org) to be put in touch with someone.*

Mitch Hefter said we are looking for content.

### **9.1.2 NAMM**

Mitch Hefter reminded everyone that ESTA are again partnering with NAMM, and seeking proposals for classes to be presented at the NAMM show in January.

### **9.2 Above & Beyond Awards**

*The nomination site is open year round at [http://tsp.esta.org/tsp/news/award\\_nomination.html](http://tsp.esta.org/tsp/news/award_nomination.html). Nominate your peers!*

### **9.3 NEC public review**

Mitch Hefter advised the assembly that the second draft report on the NEC is now out for public review. It has a short cycle, closing August 30. Steve Terry identified one item of note: single-pole separable connectors requirements are being moved out of 530 into 406. Interested parties are encouraged to download and review the public review copy and make comments if they so desire.

## **10 Schedule for future meetings**

Visit <http://tsp.esta.org/tsp/meetings/index.php> for the most current schedule.

### **10.1 October meetings**

The fall meetings will be held 4-8 October, here at the Marriott Solana in Westlake, Texas. The EPWG is currently scheduled for Friday 5 October 2018, from 2:00 p.m. to 6:00 p.m. CDT.

### **10.2 January ESTA meetings**

The January ESTA meetings are taking place in conjunction with the NAMM show in Anaheim, California, which is scheduled for 24-27 January 2019.

After discussion, it was decided that an EPWG meeting should be scheduled for January.

## **11 Adjournment**

Steve Terry moved for adjournment. The agenda being completed, Mitch Hefter announced that the meeting was adjourned at 10:55 a.m.

Electrical Power Working Group Members as of 24 July 2018

Delegate	Company	Representing	Voting status	Int. cat.
Kevin Amick	IATSE Local 479	IATSE Local 479	P	G
Matthew Antonucci	Contract Services Administration Trust Fund	Contract Services Administration Trust Fund	P	U
Robert Barbagallo	Solotech Inc.	Solotech Inc.	O	DR
Alyxander Bear	Insomniac	Insomniac	O	DE
Justin Bennett	University of the Incarnate Word	University of the Incarnate Word	P	U
Louis Bradfield	Louis Bradfield	Louis Bradfield	O	U
John (JA) Byerly	IATSE Local 479		A	U
Richard Cadena	Academy of Production Technology	Academy of Production Technology	O	G
Ron Dahlquist	Dadco	Dadco	O	MP
James Davey	AC Power Distribution Inc.	A.C.T. Lighting, Inc.	P	CP
Jeremy Day	Lumenpulse Lighting Inc.	Lumenpulse Lighting Inc.	O	MP
Rodger Dean	R. Dean Lighting Limited	R. Dean Lighting Limited	P	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
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



Electrical Power Working Group Members as of 24 July 2018

Delegate	Company	Representing	Voting status	Int. cat.
Mitch Hefter	Mitch Hefter	USITT	P	U
Jim Holladay	Luxence	Luxence	O	G
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
Roger Lattin	I.A.T.S.E. Local 728	I.A.T.S.E. Local 728	P	U
Michael Lay	Signify	Signify	P	MP
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	A	U
Ty Mellon	Tyron J Mellon, Jr.	Tyron J Mellon, Jr.	I	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	O	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
Larry Schoeneman	DesignLab Chicago, Inc.	DesignLab Chicago, Inc.	P	DR
Ford Sellers	Chauvet Lighting	Chauvet Lighting	O	MP
Mike Skinner	CBS Studio Center	Alliance of Motion Picture and Television Producers	O	U

Electrical Power Working Group Members as of 24 July 2018

Delegate	Company	Representing	Voting status	Int. cat.
Jonny Starr	TMB	TMB	O	MP
Steve Terry	Electronic Theatre Controls	Electronic Theatre Controls, Inc.	P	MP
Robert Timmerman	Philips Color Kinetics	Philips Lighting	O	MP
James Tomlinson	Team Tomlinson	Team Tomlinson	O	G
Stephen Vanciel	IATSE Local 631	IATSE Local 631	P	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

**Voting Status Key:** P = Principal voter, A = Alternate voter, I = Individual voter, O = Observer member, exf = Ex Officio member (staff)

**Interest Category Key:** CP = Custom-market producer, DE = Designer, DR = Dealer or rental company, G = General interest, MP = Mass-market producer, U = User