

Minutes
Electrical Power Working Group
Friday 4 March 2022

Chairpersons:

Mitch Hefter; USITT; P; U
Justin Bennett; University of the Incarnate Word; P; U (presiding)

Recording Secretaries:

Karl Ruling and Richard Nix (ESTA)

Attendees:

Alan M. Rowe; I.A.T.S.E. Local 728; A; U
Don Earl; Earl Girls, Inc.; P; DR
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Elizabeth E. (Lizz) Pittsley; Elizabeth Pittsley; P; U
George Long; Aggreko; P; DR
Hans Lau; I.A.T.S.E. Local 728; A; U
Jerry Gorrell; Theatre Safety Programs; P; U
John Valus Jr.; Lex TM3; A; MP
Keith S. Woods; IATSE Local 891; P; U
Kevin Amick; IATSE Local 479; P; G
Mark Pollock; Littelfuse, Inc.; P; MP
Michael Lay; Candela Controls, Inc; P; G
Mike Webb; Motion Laboratories, Inc.; P; MP
Mike Skinner; Contract Services Administration Trust Fund; P; U
Nehad El-Sherif; Nehad El-Sherif; I; G
Quinten James; QtoCue Lighting Design; O; U
Robert Haycock; UC Berkeley; I; U
Stephen Vanciel; Stephen Vanciel; P; U
Steve Terry; Electronic Theatre Controls, Inc.; P; MP
Wendy Russell; Electronic Theatre Controls, Inc; A; MP

Visitors:

Pat O'Keefe; Lex Products

1 Opening remarks

Justin Bennet ran the meeting. Called it to order at 11:03. He welcomed everyone to the meeting, thanked them for attending, and gave instruction for muting microphones and cell phones when not speaking.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

Justin Bennett read the following statement aloud to the assembly:

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 the pamphlet. No concerns were raised.

2.2 Reading of the call for patents

Justin Bennett read the following statement aloud to the assembly:

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

Justin Bennett read the following statement aloud to the assembly:

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.

Richard Nix said that renewal emails had been sent, and asked everyone to look for them in their email inboxes.

3.2 Introduction of attendees and taking attendance.

A legal pad was circulated in the room for taking attendance. The people in the room and on-line introduced themselves.

3.3 Determination of quorum

Justin Bennett declared that enough voting attendees were present to meet the requirements for both a quorum and supermajority.

3.4 Processing of new and other membership requests

Steve Vanciel asked for a change of representation to represent himself instead of IA 631.

Robert Haycock moved to approve the request. The motion was seconded, and approved without objection or abstentions.

3.5 Changes to observer status due to lack of participation

The following people will lose voting status if this meeting is missed:

*Ken Wagner, representing Ken Wagner; User
Robert Haycock; UC Berkeley; User*

Ken Wagner was not present, so his voting status was changed accordingly.

3.6 Consensus body

The list of consensus voting members, after all of today's meeting actions, is as follows:

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

Delegate	Representing	Voting status	Int. cat.
Matthew Antonucci	Contract Services Administration Trust Fund	A	U
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
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	P	U
Art Wanuch	Entertainment Electrical Safety Association	P	G
Ian Foulds	Entertainment Electrical Safety Association	A	G
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
Keith S. Woods	IATSE Local 891	P	U
Simon Hunt	IATSE Local 891	A	U
Bob Luther	Lex TM3	P	MP
John Valus Jr.	Lex TM3	A	MP
Mark Pollock	Littelfuse, Inc.	P	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
Stephen Vanciel	Stephen Vanciel	I	U
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
	Total votes possible	21	
Subtotals by interest categories	Custom producer (CP):	0	CP
	Designer (DE):	0	DE
	Dealer or rental company (DR):	2	DR
	General interest (G):	4	G
	Mass-market producer (MP):	5	MP
	User (U):	10	U

P = Principal voter; A = Alternate voter; I=Individual voter

4 Approval of the minutes from the previous meeting

[See EPmin09-2021_DRAFT.pdf]

Don Earl moved to approve the minutes. The motion was seconded, and carried without objection or abstentions.

5 Approval of agenda

Mitch Hefter requested the agenda be amended to include discussion about the Event Safety Working Group's Electrical task group document, as a new item 8.5.

Steve Terry moved to approve the agenda as amended. The motion was seconded, and carried without objection or abstention.

6 Old business

6.1 ANSI E1.16 – 2002 (R2021) Entertainment Technology – Configuration Standard for Metal Halide Ballast Power Cables

Reaffirmation, revision, or withdrawal by 28 October 2026.

No news or action at this meeting.

6.2 ANSI E1.19 – 2021, Recommended Practice for the Use of Class A Ground-Fault Circuit Interrupters (GFCIs) Intended for Personnel Protection in the Entertainment Industry

Reaffirmation, revision, or withdrawal by 15 October 2026.

No news or action at this meeting.

6.3 ANSI E1.24 – 2012 (R2021), pin connectors

Reaffirmation, revision, or withdrawal by 28 October 2026.

No news or action at this meeting.

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.

Steve Terry moved to reaffirm. The motion was seconded. There was discussion about the advantages and caveats of public review with concurrent letter ballot. The consensus was that we should have a concurrent public review and letter ballot. The motion carried without objection or abstentions.

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.

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 action at this meeting. However, Karl Ruling reported on an email conversation he'd had with an AV manufacturer in Germany about the field-testing in the standard. The manufacturer was concerned that they would have to proof-test every one of their clamps. Their clamps have a load rating per applicable European hardware standards, but those standards do not require proof-testing every unit.

Karl explained that the standard was to guide people in the field who are hanging equipment. They need to know that the equipment will hold the load and should be using load-rated hardware. However, a lot of hanging hardware in the United States has no load rating from the manufacturer or vendor. The field-test procedure in the standard is give a stage worker a way to determine what a clamp will hold and apply their own load-rating to it.

6.7 ANSI E1.58 – 2017, Indoor equipment outdoors

Reaffirmation, revision, or withdrawal by 11 October 2022.

Steve Terry moved to reaffirm, with the public review and letter ballot running concurrently. The motion was seconded, and carried without objection or abstentions.

7 New business

None.

8 Other business and announcements

8.1 Above & Beyond Awards

Nominations can be made on the website, at http://tsp.esta.org/tsp/news/award_recipients.html.

Justin Bennett acknowledged the A&B Award to Alan Rowe.

For successfully chairing the industry Task Group that created a complete re-write and modernization of NEC Article 530 covering Motion Picture and Television Studios and Remote Locations. This Article had not been materially changed for many decades, and did not come close to covering current safe practice.

Alan not only acted as the editor for the new material, he convened multiple focus groups from the motion picture industry to get consensus on the proposed changes in advance of submission the NFPA. It was a skillful effort deserving recognition and thanks.

Steve Terry and Mitch Hefter praised his work. An important part of this was getting buy-in from a broad group of affected parties.

Alan Rowe thanked everyone, including those who had helped him through the process: Steve Terry, Hans Lau, and others.

Steve Terry reiterated how important this effort is to the industry, especially noting that the initial draft submitted by Alan Rowe was accepted almost in its entirety by the code change committee, and required very little revision before being finally approved.

Eddie Kramer also expressed his thanks for Alan's efforts.

8.2 IES report

Mitch Hefter reported that the IES Controls Committee has resolved Committee comments on new BSR/IES LP-16 Lighting Practice – Documenting Control Intent Narratives and Sequence of Operation. It will be in Public Review March 11 thru April 25, 2022.

8.3 NEC report

The Correlating Committee met in February to review 2nd draft revisions from the panels and issue any correlating actions. Steve Terry has identified at least one issue to resolve regarding outdoor use & ESTA Standards references, NITMAMs are due April 11, 2022.

Mitch Hefter is now Steve Terry's Alternate to Panel 13 representing USITT. (Both still serve on Panel 15). Bill Ellis has applied as ESTA's alternate to Jason Potterf on Panel 18. Mitch received a 25 Year "Club" Pin for service on Panel 15.

Terry pointed out some major changes:

- Changes to Article 530 now makes it clear that it applies to shooting on locations.
- The 400% over-current protection rule only applies to feeder cables.
- Wiring requirements in support areas is also clarified.
- Special purpose multi-circuit cables are now accepted.
- ESTA's E1.19 and E1.58 are now referenced.
- Article 700 Class 2 emergency lighting circuits section has significant changes.

8.4 USITT report

Mitch Hefter reported that we're here and having a conference. Also, the Bylaws were revised in January for conformance with NY non-profit laws and completing the transition to a governance Board (not operational) effective July 1, 2022; Vice-Presidents positions were removed last August (sitting VPs complete their terms). The Board adopted a motion to reduce the voting board size from almost 30 down to 15. Sitting directors complete their terms, so the 15 voting member size will not be fully in place until 2025-2026.

8.5 Event Safety WG – Electrical Task Group

Most of you should recall receiving a request for a courtesy review of BSR ES1.17, Event Safety - Electrical Installations and Lighting from the Task Group as they prepared for taking the draft document forward to a Public Review. Several of us responded, and the Task Group is reviewing that feedback. To further the discussion, I have been asked for some additional feedback from the EPWG:

- *What problem are we trying to solve with a new ESWG standard and for what audience*?*
- *What do you think should be in such a document?*

- *Should this be a standard, recommended practice, compendium** (paraphrase key existing codes, standards, practices with appropriate citations)?*

Robert Haycock asked about the origin of the questions. Richard Nix explained that they arose out of discussions between two working group chairpersons. There are members of both working groups, and of the task group present in the room, so – while coordination between the working groups might be presumed -- the actual coordination may be less than perceived.

Robert Haycock thanked the EPWG members who gave feedback. He reported that they are still reviewing it, about half the EPWG feedback comments have been addressed, and most were accepted. He said, with affirmation from Mitch Hefter, that the EPWG is not in charge of this project. He invited all those willing to participate more actively on the task group to join the ESWG.

There was more discussion. Don Earl explained the need for the standard and the audience it was being written for. This audience is largely made up of event promoters (producers) who do not know or understand the technical details, but they still need to hire people who do understand.

Steve Vanciel said he thought the idea of a compendium might be a useful approach. Jerry Gorrell also agreed that the compendium approach might be most useful, because the people actually doing this type of work generally need to be legally qualified. Steve Vanciel replied that he has worked with AHJ's who are not qualified, and don't care to be qualified.

Steve Terry noted that referencing part of the NEC without exactly mirroring the NEC is a big problem, and some of the requirements he'd seen in the previous draft illustrated such issues.

Hans Lau asked if the 44 version was the most current. Yes, that was the version distributed to this group.

Justin Bennett ended discussion, asking everyone to submit their feedback within two weeks. He asked that this be added to future agendas as a standing report item. Richard Nix and Karl Ruling will add an ES1.17 report to future EPWG agendas.

9 Schedule for future meetings

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

TSP meetings will be planned around the NAMM Show, June 3 through 5 at the Anaheim Convention Center, face-to-face and on-line via WebEx.

10 Adjournment

Having reached the end of the agenda, Justin Bennett declared the meeting adjourned at 12:10.

Electrical Power Working Group Members as of 04 March 2022

Name	Representing	Status	Int Cat
Kevin Amick	IATSE Local 479	P	G
Matthew Antonucci	Contract Services Administration Trust Fund	A	U
Robert Barbagallo	Solotech Inc.	O	DR
Alyxzander Bear	Insomniac	O	DE
Justin Bennett	University of the Incarnate Word	P	U
Steve Brock	Guardian Entertainment Inc	O	DR
John (JA) Byerly	IATSE Local 479	O	G
Richard Cadena	Academy of Production Technology	O	G
James Davey	A.C.T. Lighting, Inc.	O	CP
Jeremy Day	Lumenpulse Group	O	MP
Rodger Dean	R. Dean Lighting Limited	O	DR
Jim Digby	Event Safety Alliance	O	U
Marsha DuBois	Pintech Stage Connectors, Inc.	O	CP
James Eade	ABTT	O	G
Don Earl	Earl Girls, Inc.	P	DR
Nehad El-Sherif	Nehad El-Sherif	I	G
Trevor Forrest	Helvar Lighting Control	O	MP
Ian Foulds	Entertainment Electrical Safety Association	A	G
Mike Garl	Mike Garl Consulting LLC	exf	
Jerry Gorrell	Theatre Safety Programs	P	U
Erin Grabe	ESTA	exf	G
Mike Harwood	William F. White International	O	DR
Robert Haycock	UC Berkeley	I	U
Mitch Hefter	USITT	P	U
Simon Hunt	IATSE Local 891	A	U
Quinten James	QtoCue Lighting Design	O	U
John Valus Jr.	Lex TM3	A	MP
Jerald Kraft	JTH Lighting Alliance	O	G
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Charles (Chuck) Kurten	Underwriters Laboratories, Inc.	O	G
Hans Lau	I.A.T.S.E. Local 728	A	U
Michael Lay	Candela Controls, Inc	P	G

Electrical Power Working Group Members as of 04 March 2022

Name	Representing	Status	Int Cat
George Long	Aggreko	P	DR
Bob Luther	Lex TM3	P	MP
Charles McIntyre	I.A.T.S.E. Local 728	P	U
Ty Mellon	Tyron J Mellon, Jr.	O	G
Rick Montgomery	Motion Laboratories, Inc.	A	MP
Chris Moulton	Contract Services Administration Trust Fund	A	U
Richard J. Nix	ESTA	exf	G
Elizabeth E. (Lizz) Pittsley	Elizabeth Pittsley	P	U
Mark Pollock	Littelfuse, Inc.	P	MP
Jason Potterf	Cisco	P	MP
Alan M. Rowe	I.A.T.S.E. Local 728	A	U
Karl G. Ruling	ESTA	exf	G
Wendy Russell	Electronic Theatre Controls, Inc	A	MP
Ford Sellers	Chauvet Lighting	O	MP
Michael Shaw	Motion Laboratories, Inc.	A	MP
Mike Skinner	Contract Services Administration Trust Fund	P	U
Jonny Starr	TMB	O	MP
Steve Terry	Electronic Theatre Controls, Inc.	P	MP
Robert Timmerman	Signify	O	MP
Stephen Vanciel	Stephen Vanciel	I	U
Ken Wagner	Ken Wagner	O	U
Art Wanuch	Entertainment Electrical Safety Association	P	G
Colin Waters	TMB	O	DR
Mike Webb	Motion Laboratories, Inc.	P	MP
Keith S. Woods	IATSE Local 891	P	U
Jeong Sik Yoo	Ghost LX	O	DE