Meeting Minutes: Board of Electricity

Date: July 9, 2024 Time: 9:00 a.m.

Location: DLI, 443 Lafayette Road No., St. Paul, MN 55155 | WebEx | Phone

Members Present

Keith Colvard
 Thomas Fletcher
 Cole Funseth
 Sarah Gudmunson

5. Steve Haiby6. Jeff Heimerl

Duane Hendricks – Chair
 Dean Hunter – CO's Designee

9. Trevor Turek – Vice Chair

10. Desiree Weigel – Secretary

Members Absent

Alfreda Daniels Juasemai

Travis Thul

DLI Staff & Visitors

Jeff Lebowski (Board Counsel) - WebEx

Lyndy Logan (DLI)

Daniel Becker (DLI) – WebEx Krystle Conley (DLI) – WebEx Neil Furman (DLI) – WebEx Hannah Mardaus (DLI) – WebEx

John McNamara (DLI) Josiah Moore (DLI) Sean O'Neil (DLI)

Chad Payment (DLI) – WebEx

Clara Albert (Electrical Assn) – WebEx Michelle Dreier (Electrical Assn) – WebEx

David Frary (IBEW) – WebEx

Andy Snope (IBEW)

John Williamson – WebEx

1. Call to Order

- A. **Roll Call:** Chair Hendricks called the meeting to order at 9:02 a.m. Roll call was taken by Secretary Weigel and a quorum was declared with 10 of 12 voting members.
- B. Announcements/Introductions Chair Hendricks
 - Re-appointed members: Sarah Gudmunson, Steve Haiby, Jeff Heimerl, Travis Thul and Desiree Weigel
 - New members: Keith Colvard (formerly M. Hanson), Master Electrician Contractor
 - Everyone present in person and remotely are able to hear all discussions.
 - All votes will be taken by roll call if any member is attending remotely.
 - All handouts discussed and WebEx instructions are posted on the Board's website.
- C. WebEx instructions/procedures were explained.

2. Approval of Meeting Agenda

A motion was made by Heimerl, seconded by Haiby, to approve the agenda as presented. The vote was unanimous with 11 votes in favor of the motion; the motion carried.

3. Approval of Previous Meeting Minutes

A motion was made by Fletcher, seconded by Heimerl, to approve the Apr. 9, 2024, regular meeting minutes as presented. The vote was unanimous with 11 votes in favor of the motion; the motion carried.

4. Regular Business

- A. Expense Approval Expense reports will be forwarded to Financial Services for payment.
- B. Enforcement & licensing update Sean O'Neil
 - Electrical Enforcement Actions can be found on the department's website at: http://www.dli.mn.gov/business/electrical-contractors/electrical-enforcement-actions
- C. Inspection update Dean Hunter see Attachment A.

5. Special Business

A. Officer nominations – turn meeting over to Dean Hunter, Commissioner's Designee

a. Chair

Fletcher nominated Duane Hendricks. There were no other nominations. The majority roll call vote ruled 8 in favor and two abstentions (Hendricks and Hunter); Hendricks was re-elected as Board Chair.

b. Vice-Chair

Heimerl nominated Trevor Turek. There were no other nominations. The majority roll call vote ruled 8 in favor with two abstentions (Hunter and Turek); Turek was re-elected as Board Vice-Chair.

c. Secretary

Turek nominated Desiree Weigel. There were no other nominations. The majority roll call vote ruled 8 in favor with two abstentions (Hunter and Weigel); Weigel was re-elected as Board Secretary. Turn the meeting over to the Board Chair

B. 2026 NEC update - Dean Hunter - see Attachment B

6. Committee Reports

Construction Codes Advisory Council (CCAC) | Hendricks (rep)/Daniels (alt) – Presentation Feb. 29, 2024

7. Complaints and Correspondence

None

8. Open Forum

None

9. Board Discussion

- Re-elected officers were thanked for their service to the Board.
- Hunter said they now have three virtual electrical inspectors. All areas of the state, except the SW Metro, are now inspected by state employees. This final area will transition to state-inspected by the end of the year.

10. Announcements

Regularly scheduled meetings occur on the second Tuesday of each quarter at 9:00 a.m., in person at DLI with WebEx/Phone options

- Oct. 8, 2024
- Jan. 14, 2025

11. Adjournment

A motion was made by Heimer, seconded by Haiby, to adjourn the meeting at 9:56 a.m. The roll call vote was unanimous with 10 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Desiree Weigel

Desiree Weigel, Secretary

Green meeting practices

The State of Minnesota is committed to minimizing environmental impacts by following green meeting practices. DLI is minimizing the environmental impact of its events by following green meeting practices. DLI encourages you to use electronic copies of handouts or to print them on 100% post-consumer processed chlorine-free paper, double-sided.



Electrical Permit and Inspection History

State Inspection Areas

Permi	Inspection Information				
Total Permits Issued	Permits Completed	Permits Closed but Not Finaled	Final "Final" Insp.*	All other Insp.**	Total Inspections
130,192	128,357	8,323	117,173	60,659	177,832
138,027	131,293	7,551	121,890	61,190	183,080
132,491	109,213	4,937	128,374	62,967	191,341
61,600	31,759	749	63,343	34,198	97,541
	Total Permits Issued 130,192 138,027 132,491	Issued Permits Completed 130,192 128,357 138,027 131,293 132,491 109,213	Total Permits Issued Permits Completed Permits Closed but Not Finaled 130,192 128,357 8,323 138,027 131,293 7,551 132,491 109,213 4,937	Total Permits Issued Permits Completed Permits Closed but Not Finaled Final "Final" Insp.* 130,192 128,357 8,323 117,173 138,027 131,293 7,551 121,890 132,491 109,213 4,937 128,374	Total Permits Issued Permits Completed Permits Closed but Not Finaled Final "Final" Insp.* All other Insp.** 130,192 128,357 8,323 117,173 60,659 138,027 131,293 7,551 121,890 61,190 132,491 109,213 4,937 128,374 62,967

The "**Permit Information**" and the "**Inspection Information**" do not necessarily represent the same permits. The "Permit Information" represents permits issued that Calendar Year. The "Inspection Information" represents the inspections performed that calendar year. The inspections may be for permits that were issued in previous calendar years.

"**Total Permits Issued**" means the permits Issued in the calendar year indicated. Includes permits in status (milestone) 'Abandon', 'Closed', 'Expired', 'Finaled', 'Issued', or 'Hold'. Does not include any other milestone such as "Out of state Inspected Area", "Refunded", etc.

"Permits Completed" means the "Total Permits Issued" for the calendar year, this is the number of permits placed into 'Closed', 'Expired', 'Abandon', or 'Finaled' status.

"Permits Closed but Not Finaled" means of the "Permits Completed" for the year, this is the number of those permits placed by procedural policy into 'Closed', 'Expired', or 'Abandon' status.

"Final "Final" Insp." represents the number of inspections completed that calendar year that caused the permits to be placed into "Finaled" status or milestone. The permits were not necessarily issued that year.

"All other Insp." represents the number of inspections completed that calendar year that did not result in a ""Finaled" status or milestone. The permits were not necessarily issued that year.

"Total Inspections" represents the total (Finals and Others) number of inspections completed that calendar year. The permits were not necessarily issued that year.

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Electrical Permits Issued Summary Issued from 1/1/2024 to 7/2/2024

ELE Permit Type	New Structure or Existing and/or Other Assoc. Items	Number of Permits Issued	% of Permit Type	% of Total
Multi-Family Dwelling	Existing Building or Other Items	1,056	94.71%	1.73%
	New Building	59	5.29%	0.10%
	Total	1,115		1.83%
Non-Dwelling	Total	13,998		22.95%
One-Family Dwelling	Existing Dwelling or Other Items	32,098	87.88%	52.63%
	New Dwelling	4,428	12.12%	7.26%
	Total	36,526		59.89%
One-Family Home (Homeowner Issued Permit)	Existing Home or Other Items	3,328	82.23%	5.46%
	New Home	719	17.77%	1.18%
	Total	4,047		6.64%
Technology Systems	Total	493		0.81%
Transitory (Carnival, etc.)	Total	697		1.14%
Two-Family Dwelling	Existing Building or Other Items	277	87.66%	0.45%
	New Building	39	12.34%	0.06%
	Total	316		0.52%
Utility Load Management	New Device	323	8.51%	0.53%
Device	Replacement Device	3,473	91.49%	5.69%
	Total	3,796		6.22%
Total		60.000		

Total 60,988



Statewide Activity Report For the Period 01/01/2024 thru 7/2/2024

Total Active	Date Range Activity			Isuued Permits	Aging of Expired Permits			
Current	IN	OUT	Net Change	< 12 Months	12-18 Months	18-36 Month	> 36 Months	> 12 Months
Count	Count	Count	Count	Count	Count	Count	Count	Count
62,339	61,608	71,690	(10,082)	46,921	5,915	7,728	1,122	14,765
	Percentage of Current Active Permits							
	99%	115%	-16%	75%	9%	12%	2%	24%
	# of Ins	pections Performed	Inspection Repo	orts AF	Bs Ref	unds <u>License</u>	<u>Checks</u>	Violation Reports
For Da	ate Range:	97,878	11,051	10,9	921 3,:	258 4	96	0
Year to D	ate Total:	97,878	11,051	10,9	921 3,:	258 4	96	0

[&]quot;Total Active": The total current active permits ("Issued", "Expired" or "Hold" status).

[&]quot;Date Range Activity": The permits that were Issued and permits closed out and the net change for the selected date range.

[&]quot;Issued Permits": Represents the number of permits that are currently less than 12 months old.

[&]quot;Expired Permits": Permits for installations filed with inspection fees of \$250 or less are void 12 months from the original filing date regardless of whether the wiring is completed. Permits filed with inspection fees of \$250 or less are not refundable after 12 months from the original filing date. The authority to install electrical wiring associated with a specific permit is void at the time of a final inspection or expiration, whichever occurs first. The authority to inspect wiring covered by a permit continues until the installation is approved at a final inspection.

[&]quot;Aging of Expired Permits": Represents the age of expired permits that are still active. This does not include any permits that have a value over \$250.

[&]quot;For Date Range:" Represents the numbers in the respective columns during that date range. Violation reports are yet to be counted by this report.

[&]quot;Year to Date Total:" Represents the numbers for the calendar year beginning January 1st.

[&]quot;%": Represents the precentage compared to "Current".

[&]quot;AFBs": Additional Fees for Billings (invoices for inspection fee shortages)



Issued Electrical Solar Permits Summary Issued from 1/1/2024 to 7/2/2024

Permit Type Type of Dwelling or Non- Dwelling	Permit Variant Dwelling New or Existing	Solar Systems Grouped by Size	No of permits	Percentage of Group
Multi-Family			36	2.56% Of Total
Dwelling	Existing		31	86.11% of Type
	Building or Other Items	10K to 40K	27	87.10% of Variant
		40K to 1 meg	4	12.90% of Variant
	New Building		5	13.89% of Type
		10K to 40K	2	40.00% of Variant
		40K to 1 meg	3	60.00% of Variant
Non-Dwelling			217	15.46% Of Total
	Non-Dwelling		217	100.00% of Type
		1 Meg to 5 Meg	3	1.38% of Variant
		10K or <	42	19.35% of Variant
		10K to 40K	102	47.00% of Variant
		40K to 1 meg	66	30.41% of Variant
		Unknown	4	1.84% of Variant
One-Family			1,105	78.70% Of Total
Dwelling	Existing Dwelling or Other Items		1,045	94.57% of Type
		10K or <	642	61.44% of Variant
		10K to 40K	284	27.18% of Variant
		40K to 1 meg	9	0.86% of Variant
		Unknown	110	10.53% of Variant
	New Dwelling		60	5.43% of Type
		10K or <	31	Ed C70/ of Mariant
		101001	31	51.67% of Variant
		10K to 40K	27	45.00% of Variant
One-Family		10K to 40K	27	45.00% of Variant
Home (Permit Issued to	Existing Home	10K to 40K	27 2	45.00% of Variant 3.33% of Variant
Home (Permit	Existing Home or Other Items	10K to 40K	27 2 41	45.00% of Variant 3.33% of Variant 2.92% Of Total
Home (Permit Issued to		10K to 40K Unknown	27 2 41 30	45.00% of Variant 3.33% of Variant 2.92% Of Total 73.17% of Type
Home (Permit Issued to		10K to 40K Unknown 10K or <	27 2 41 30 8	45.00% of Variant 3.33% of Variant 2.92% Of Total 73.17% of Type 26.67% of Variant
Home (Permit Issued to		10K to 40K Unknown 10K or < 10K to 40K	27 2 41 30 8 17	45.00% of Variant 3.33% of Variant 2.92% Of Total 73.17% of Type 26.67% of Variant 56.67% of Variant
Home (Permit Issued to	or Other Items	10K to 40K Unknown 10K or < 10K to 40K	27 2 41 30 8 17 5	45.00% of Variant 3.33% of Variant 2.92% Of Total 73.17% of Type 26.67% of Variant 56.67% of Variant 16.67% of Variant
Home (Permit Issued to	or Other Items	10K to 40K Unknown 10K or < 10K to 40K Unknown	27 2 41 30 8 17 5	45.00% of Variant 3.33% of Variant 2.92% Of Total 73.17% of Type 26.67% of Variant 56.67% of Variant 16.67% of Variant 26.83% of Type

Solar Systems Grouped by Size	•	No of permits	% of Total
1 Meg to 5 Meg		3	0.21%
10K or <		737	52.49%
10K to 40K		460	32.76%
40K to 1 meg		82	5.84%
Unknown		122	8.69%
Total		1,404.00	
Solar Systems Grouped by Size		Watts	% of Total
1 Meg to 5 Meg	Ę	57,630,240	53.13%
10K or <		4,161,285	3.84%
10K to 40K		9,301,207	8.57%
40K to 1 meg 3		37,384,509	34.46%
Unknown		Unknown	
Total 1		08,477,241	
Average		84,616	

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Issued Electrical Solar Permits Summary Issued from 1/1/2024 to 7/2/2024

Two-Family			5	0.36% Of Total
Dwelling	Existing		5	100.00% of Type
	Building or Other Items	10K or <	5	100.00% of Variant
Total			1,404	

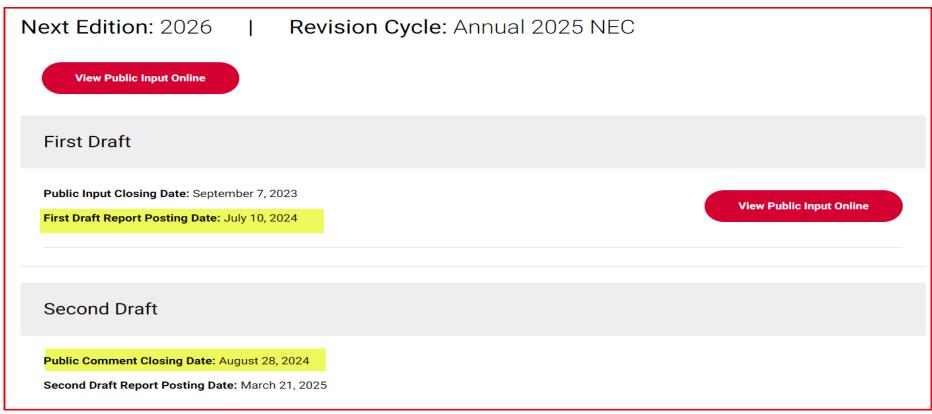


2026 NEC proposed changes (First Draft – prior to comments)



1

Where are we at in the 2026 NEC code making process?

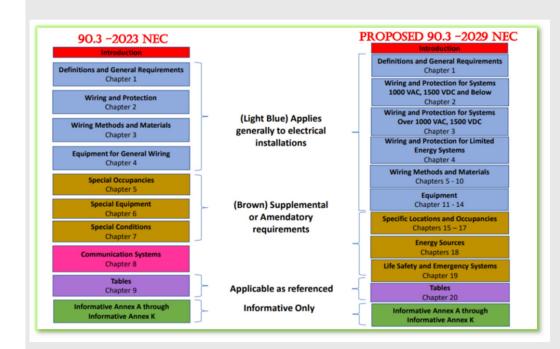


https://www.nfpa.org/codes-and-standards/nfpa-70-standard-development/70

Code wide items to look for.....

Structure changes to align with the transition to the 2029 NEC

- Article 220 Load Calculations will be relocated to Article 120
- Article 750 Energy Management
 Systems will be relocated to Article 130
- Removed the Chapter 8 independence
- Added medium voltage and limited energy articles – to assist with the parallel numbering in 2029 NEC



Limited-Energy System.

The equipment and cables of an end-to-end system that are power-restricted to ensure the energy delivered into any fault provides acceptable protection for fire prevention and electric shock. (CMP-3)

3

- 1. 210.8(F) Exception No. 2. Special Purpose Ground Fault Protection will be allowed to be used for HVAC equipment with an effective date of January 1st, 2029. First Revision No. 7748-NFPA 70-2024 [Section No. 210.8(F)]
- 2. 210.52(C)(4) Receptacle placement below the countertop or worksurface. **First Revision No. 8192-NFPA 70-2024 [Section No. 210.52(C)]**

(4) Receptacle Outlet Locations Prohibited.

Required and permitted receptacle outlets shall not be installed on cabinet sides or wall surfaces that are below countertops and work surfaces. Required and permitted receptacle outlets shall not be installed on adjacent walls extending from the base cabinets within 610 mm (24 in.) horizontally and downward from the countertop and work surface edge within 610 mm (24 in.) vertically.

Exception No. 1: Receptacle outlets installed in a drawer shall be permitted to be installed below countertops and work surfaces.

Exception No. 2: Receptacle outlets located in the specified location in 210.52(A)(2) shall not be located within 610 mm (24 in.) of the countertop or worksurface.

3. 230.70 – Service equipment disconnecting means. New language to eliminate the confusion around "emergency disconnects" required for single and two-family dwelling units. First Revision No. 9155-NFPA 70-2024 [Section No. 230.70]

230.70 General.

Means shall be provided to disconnect all ungrounded conductors in a building or structure from the service conductors.

(A) <u>Service Disconnect</u> Location.

Service disconnects shall be installed in accordance with 230.70(A)(1), 230.70(A)(2), 230.70(A)(3), and 230.70(A)(4).

(1) Readily Accessible Location.

Service disconnects shall be installed at a readily accessible location either outside of a building or structure or inside nearest the point of entrance of the service conductors.

(2) One- and Two-Family Dwellings.

Service disconnects shall be installed in a readily accessible outdoor location on or within sight of the one- or two-family dwelling unit.

4. 300.7(D)(3) (section changed) – Service raceways (including direct buried cables), not encased in concrete, will now be required to have a warning ribbon installed. First Revision No. 8680-NFPA 70-2024 [Section No. 300.5(D)(3)]

5. 334.19 – NM Cable entries will be limited to 1" of sheathing in the box. First Revision No. 8085-NFPA 70-2024 [Section No. 334.19]

334.19 Cable Entries.

The sheath on nonmetallic-sheathed cable shall extend not less than 6 mm (¼ in.) and not greater than 25.4 mm (1 in.) beyond any cable clamp or cable entry in the enclosure.

- 6. Article 525 rewrite for carnivals, circuses, fairs, and similar events. First Revision No. 9205-NFPA 70-2024 [Article 525]
- ** Added language for generators and enforceable disconnect requirements for tents.

7. 547.44, 555.14, and 682.33 – Added language for the equipotential plane. **First Revision No. 8722-NFPA 70-2024 [Section No. 547.44]**

(C) Equipotential Plane Construction.

Equipotential planes shall be constructed as specified in 547.44(C)(1) or 547.44(C)(2).

(1) Structural Reinforcing Steel.

Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent.

(2) Copper Grid.

Copper grids shall be permitted where the following requirements are met:

- (1) They are constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means
- (2) They are arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)
- 8. 550.32 Surge protection device requirements for a replacement mobile or manufactured home. First Revision No. 8514-NFPA 70-2024 [New Section after 550.32(D)]

9. 555.35(E) – Marina installation coordination and performance testing requirements. First Revision No. 9038-NFPA 70-2024 [Section No. 555.35]

(E) Coordination and Performance Testing.

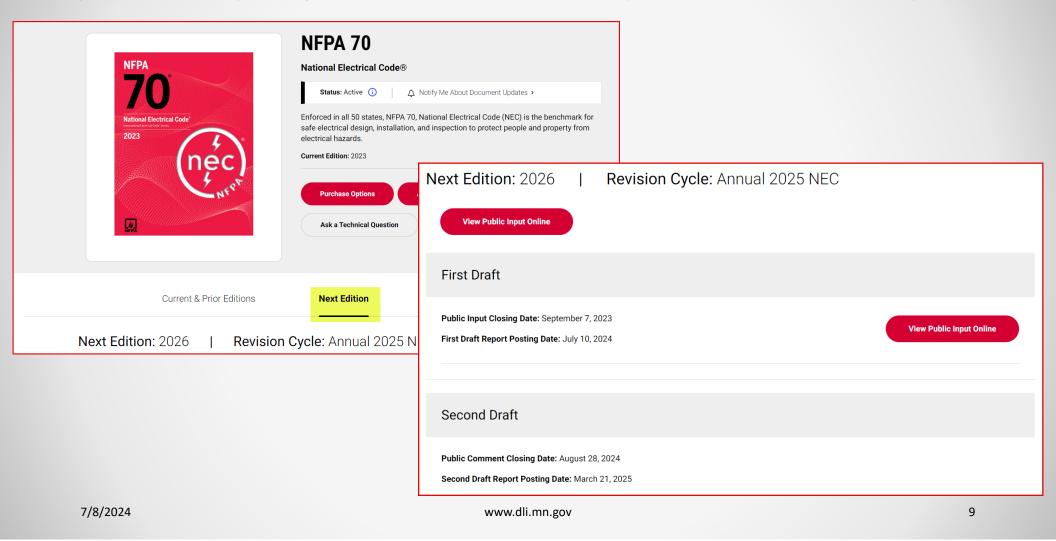
GFPE protection systems shall be coordinated and performance tested by an approved method when first installed on site. This testing shall be conducted by a qualified person(s) in accordance with the manufacturer's instructions. A written record of this testing shall be made available to the authority having jurisdiction.

10. 625.54 – EVSE GFCI protection for both receptacles and outlets. **First Revision No. 8378-NFPA 70-2024 [Section No. 625.54]**

625.54 Ground-Fault Circuit-Interrupter Protection for Personnel.

All receptacles and outlets installed for the connection of electric vehicle charging shall have ground-fault circuit-interrupter protection for personnel.

https://www.nfpa.org/codes-and-standards/nfpa-70-standard-development/70



Questions?

Dean Hunter

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