



CSA C22.1:24



Canadian Electrical Code, Part I

Safety Standard for Electrical Installations

2024
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CSA C22.1:24

Canadian Electrical Code, Part I

Safety Standard for Electrical Installations

(Twenty-sixth edition)



- The *Canadian Electrical Code, Part I*, is a voluntary code for adoption and enforcement by regulatory authorities.
- The *Canadian Electrical Code, Part I*, meets the fundamental safety principles of International Standard IEC 60364-1, *Low-voltage electrical installations*.
- Consult with local authorities regarding regulations that adopt and/or amend this Code.

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Committee on Canadian Electrical Code, Part I

(Membership list as of June 2023)

T. Olechna (<i>Chair</i>)	CSA Consumer Network, Toronto, Ontario, Canada
T. Simmons (<i>Vice-Chair</i>)	British Columbia Institute of Technology, Burnaby, British Columbia, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Representing Provincial and Territorial Electrical Inspection Authorities

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P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
K. Dunbar	Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada
K. Glubrecht	Alberta Municipal Affairs, Edmonton, Alberta, Canada
R. Grant	Nova Scotia Department of Labour, Skills & Immigration, Sydney, Nova Scotia, Canada
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S. Mercier	Régie du bâtiment du Québec, Montréal, Québec, Canada
M. Pilato	Technical Safety BC, Kelowna, British Columbia, Canada
J. C. Potts	Nunavut Department of Community and Government Services, Iqaluit, Nunavut, Canada
M. Smith	Housing, Land and Communities, Government of Prince Edward Island, Agriculture and Land, Charlottetown, Prince Edward Island, Canada

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J.C. Potts (<i>Vice-Chair</i>)	Nunavut Department of Community and Government Services, Iqaluit, Nunavut, Canada
M. S. Anderson	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
K. Dunbar	Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada
C. Fallon	City of St. John's Planning, Engineering and Regulatory Services, St. John's, Newfoundland and Labrador, Canada
K. Glubrecht	Alberta Municipal Affairs, Red Deer, Alberta, Canada
R. Grant	Nova Scotia Department of Labour, Skills & Immigration, Sydney, Nova Scotia, Canada
N. Hanna	Electrical Safety Authority, Mississauga, Ontario, Canada
T. K. Kjartanson	Manitoba Hydro, Winnipeg, Manitoba, Canada
H. Lang	Government of Yukon, Whitehorse, Yukon, Canada

S. H. Mallikarachchi	City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
D. Mayne	Government of Newfoundland and Labrador Human Resource Secretariat, St. John's, Newfoundland and Labrador, Canada
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D. L. Pickering	City of Calgary, Calgary, Alberta, Canada
J. Rowley	City of Vancouver, Vancouver, British Columbia, Canada
M. Smith	Housing, Land and Communities, Government of Prince Edward Island, Charlottetown, Prince Edward Island, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

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T. Olechna (<i>Chair</i>)	CSA Consumer Network, Toronto, Ontario, Canada
T. Simmons (<i>Vice-Chair</i>)	British Columbia Institute of Technology, Burnaby, British Columbia, Canada
P. Desilets	Leviton Canada, Pointe-Claire, Québec, Canada
S. W. Douglas	QPS Evaluation Services Inc., Toronto, Ontario, Canada
N. Hanna	Electrical Safety Authority, Mississauga, Ontario, Canada
G. Lobay	CSA Consumer Network, Ottawa, Ontario, Canada
S. Mercier	Régie du bâtiment du Québec, Montréal, Québec, Canada
I. Müller	American Wire Group, Lindsay, Ontario, Canada
D.T. Roberts	Electrical Safety Solutions Inc., Mississauga, Ontario, Canada
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

National Building Code/Canadian Electrical Code *Liaison Committee*

A. Z. Tsisserev (<i>Chair</i>)	AES Engineering Ltd., Vancouver, British Columbia, Canada
M. S. Anderson	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
G. Benjamin	ABB Electrification Canada Inc., Dorval, Québec, Canada
L. Cantelo	Larry Cantelo Technical Training, Camrose, Alberta, Canada
G. Dupont	Montréal, Québec, Canada
T. Fazzari	Mohawk College, Stoney Creek, Ontario, Canada
R. J. Kelly	Oasis Consulting, Ingleside, Ontario, Canada
A. Laroche	National Research Council Canada, Ottawa, Ontario, Canada
F. Lohmann	Canadian Home Builders' Association, Ottawa, Ontario, Canada
S. H. Mallikarachchi	City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
S. Mercier	Régie du bâtiment du Québec, Montréal, Québec, Canada
R. A. Nelson	National Electrical Trade Council, Ancaster, Ontario, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

Section Subcommittees

Section 0 — Object, scope, and definitions

G. Lobay (<i>Chair</i>)	CSA Consumer Network, Ottawa, Ontario, Canada
S. Mercier (<i>Vice-Chair</i>)	Régie du bâtiment du Québec, Montréal, Québec, Canada
B. M. Baldwin	Baldwin Services Inc., Saskatoon, Saskatchewan, Canada
S. Burger	Electrical Safety Authority, Mississauga, Ontario, Canada
T. J. Burt	Fanshawe College Applied Science and Technology, London, Ontario, Canada
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
J. N. Martin	Electrical Safety Authority Field Evaluation (ESAFE), Ottawa, Ontario, Canada
P. McDonald	St. Albert, Alberta, Canada
D. T. Roberts	Electrical Safety Solutions Inc., Mississauga, Ontario, Canada
H. Tremblay	Hydro-Québec, Montréal, Québec, Canada
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
M. Wilson	CSA Group, Toronto, Ontario, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 2 — General Rules

S. W. Douglas (<i>Chair</i>)	QPS Evaluation Services Inc., Toronto, Ontario, Canada
M. Smith (<i>Vice-Chair</i>)	CSA Consumer Network, Kitchener, Ontario, Canada
D. Beattie	Dan Beattie Electrical Inc., Spencerville, Ontario, Canada
D. Brière	CSA Group, Toronto, Ontario, Canada
L. Coulombe	Régie du bâtiment du Québec, Québec, Québec, Canada
S. Fisher	Technical Safety BC, Nanaimo, British Columbia, Canada
G. W. Jones	Assiniboine Community College, Brandon, Manitoba, Canada
R. J. Kelly	Oasis Consulting, Ingleside, Ontario, Canada
J. N. Martin	Electrical Safety Authority Field Evaluation (ESAFE), Ottawa, Ontario, Canada
D. T. Roberts	Electrical Safety Solutions Inc., Mississauga, Ontario, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 4 — Conductors

I. Müller (<i>Chair</i>)	American Wire Group, Lindsay, Ontario, Canada
A. Z. Tsisserev (<i>Vice-Chair</i>)	AES Engineering Ltd., Vancouver, British Columbia, Canada
K. Bartlett	Electrical Safety Authority, Ottawa, Ontario, Canada
J. Calabrese	Mississauga, Ontario, Canada
R. P. de Lhorbe	North Vancouver, British Columbia, Canada
R. Drury	Electro Cables, Trenton, Ontario, Canada
S. Hall	CSA Group, Toronto, Ontario, Canada
M. Humphries	CSA Group, Toronto, Ontario, Canada
S. Kelly	Electrical Safety Authority, Ottawa, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
R. Kummer	Southwire Co., Carrollton, Georgia, USA
R. A. Nelson	National Electrical Trade Council, Ancaster, Ontario, Canada
J. Rowley	City of Vancouver, Vancouver, British Columbia, Canada
J. Singh	Domtech Inc., Trenton, Ontario, Canada

M. Staples City of Victoria, Victoria, British Columbia, Canada
 M. McEwen CSA Group, Toronto, Ontario, Canada
 (Project Manager)

Section 6 — Services and service equipment

G. W. Jones (Chair) Assiniboine Community College, Brandon, Manitoba, Canada
 R. T. Hiscock (Vice-Chair) RTH Electrical Consulting, Fort Steele, British Columbia, Canada
 G. Benjamin ABB Electrification Canada Inc., Dorval, Québec, Canada
 W. J. Burr Burr and Associates, Campbell River, British Columbia, Canada
 P. Falzon Electrical Safety Authority, Mississauga, Ontario, Canada
 R. J. Kelly Oasis Consulting, Ingleside, Ontario, Canada
 M. Mihaluk Les installations électriques Auger inc., Montréal, Québec, Canada
 E. J. Power E.J. Power Engineering, Stanhope, Prince Edward Island, Canada
 D. Schill SaskPower, Regina, Saskatchewan, Canada
 H. Tremblay Hydro-Québec, Montréal, Québec, Canada
 A. Z. Tsisserev AES Engineering Ltd., Vancouver, British Columbia, Canada
 T. Pope CSA Group, Toronto, Ontario, Canada
 (Senior Project Manager)

Section 8 — Circuit loading and demand factors

A. Z. Tsisserev (Chair) AES Engineering Ltd., Vancouver, British Columbia, Canada
 S. W. Douglas (Vice-Chair) QPS Evaluation Services Inc., Toronto, Ontario, Canada
 (Representing International Association of Electrical Inspectors)
 J. Calabria Smith + Andersen, Toronto, Ontario, Canada
 C. C. Cormier Nova Scotia Power, Halifax, Nova Scotia, Canada
 L. Coulombe Régie du bâtiment du Québec, Québec, Québec, Canada
 K. Forbes City of Lethbridge, Lethbridge, Alberta, Canada
 K. W. Harrison St. Albert, Alberta, Canada
 S. Jenken City of Winnipeg, Winnipeg, Manitoba, Canada
 G. W. Jones Assiniboine Community College, Brandon, Manitoba, Canada
 R. J. Kelly Oasis Consulting, Ingleside, Ontario, Canada
 G. Kooner Vancouver Airport Authority, Richmond, British Columbia, Canada
 H. Park Power Bus Way Ltd., Mississauga, Ontario, Canada
 R. Yousef Electrical Safety Authority, Mississauga, Ontario, Canada
 M. McEwen CSA Group, Toronto, Ontario, Canada
 (Project Manager)

Section 10 — Grounding and bonding

A. Pottier (Chair) Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
 M. Pilato (Vice-Chair) Technical Safety BC, Kelowna, British Columbia, Canada
 (Representing International Association of Electrical Inspectors)
 G. Benjamin ABB Electrification Canada Inc., Dorval, Québec, Canada
 S. C. Bygrave Stantec Consulting Ltd., Dartmouth, Nova Scotia, Canada
 J. Calabrese Mississauga, Ontario, Canada
 T. Dinic Electrical Safety Authority, Mississauga, Ontario, Canada
 R. Leduc Marex Canada Ltd., Calgary, Alberta, Canada
 C. LeGrandeur Cenovus Energy Inc., Calgary, Alberta, Canada
 G. Lobay CSA Consumer Network, Ottawa, Ontario, Canada

O. Maita	Inter Pipeline Ltd., Edmonton, Alberta, Canada
M. Mihaluk	Les installations électriques Auger inc., Montréal, Québec, Canada
J. Overton	Technical Safety BC, Port Alberni, British Columbia, Canada
M. Tarabain	Hydro-One, Barrie, Ontario, Canada
C. J. Workman	Eaton Industries (Canada) Co., Burlington, Ontario, Canada
M. McEwen (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 12 — Wiring methods

S. W. Douglas (Chair)	QPS Evaluation Services Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
I. Müller (Vice-Chair)	American Wire Group, Lindsay, Ontario, Canada
M. S. Anderson	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
K. Bartlett	Electrical Safety Authority, Mississauga, Ontario, Canada
G. Benjamin	ABB Electrification Canada Inc., Dorval, Québec, Canada
P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
B. Fuhr	DJA Engineering Services, Calgary, Alberta, Canada
T. Hamden	Hubbell Canada, Pickering, Ontario, Canada
R. W. Horner	Atkore International (Allied Tube & Conduit Corp.), Harvey, Illinois, USA
I. Laouini	Corporation des maîtres électriciens du Québec, Montréal, Québec, Canada
A. Nause	IPEX Management Inc., Oakville, Ontario, Canada
A. Pottier	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
K. Richards	BnZ Engineering, Burlington, Ontario, Canada
A. Zubczyk	Georgian College, Barrie, Ontario, Canada
L. Letea (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 14 — Protection and control

R. P. de Lhorbe (Chair)	North Vancouver, British Columbia, Canada
R. T. Hiscock (Vice-Chair)	RTH Electrical Consulting, Fort Steele, British Columbia, Canada
T. Branch	PDR Technologies Inc., Oakville, Ontario, Canada
S. C. Bygrave	Stantec Consulting Ltd., Dartmouth, Nova Scotia, Canada
L. Coulombe	Régie du bâtiment du Québec, Québec, Québec, Canada
S. G. Davies	Tidewater Midstream and Infrastructure, Calgary, Alberta, Canada
T. Evans	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
G. T. Gingara	BHP, Saskatoon, Saskatchewan, Canada
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
M. Lusk	CSA Group, Charlotte, North Carolina, USA
H. Masroor	Winnipeg, Ontario, Canada
W. C. Rossmann	Pegasus Consulting, Calgary, Alberta, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 16 — Class 1 and Class 2 circuits

T. Simmons (Chair)	British Columbia Institute of Technology, Burnaby, British Columbia, Canada
T. K. Kjartanson (Vice-Chair)	Manitoba Hydro, Winnipeg, Manitoba, Canada
P. Doucet	New Brunswick Department of Justice and Public Safety, Moncton, New Brunswick, Canada

C. Fallon	City of St. John's Planning, Engineering and Regulatory Services, St. John's, Newfoundland and Labrador, Canada
D. Lenasi	Signify Canada Ltd., Langley, British Columbia, Canada
N. Mashayekh	Eaton's Bussmann Business, Lachine, Québec, Canada
R. Mitchell	Electrical Safety Authority, Mississauga, Ontario, Canada
P. Olders	G6 Systems, Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
C. Quist	Nova Scotia Power Inc., Halifax, Nova Scotia, Canada
W. Saworski	SNC Lavalin, North Battleford, Saskatchewan, Canada
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
C. Hamza (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 18 — Hazardous locations

T. S. Driscoll (Chair)	OBIEC Consulting Ltd., Calgary, Alberta, Canada
G. Lobay (Vice-Chair)	CSA Consumer Network, Ottawa, Ontario, Canada
A. Bozek	EngWorks Inc., Calgary, Alberta, Canada
M. T. Cole	Hubbell Canada ULC, Pickering, Ontario, Canada
G. Drew	Cenovus Energy Inc., Calgary, Alberta, Canada
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
B. Keane	INNIO Waukesha, Welland, Ontario, Canada
R. Kohuch	QPS Evaluation Services Inc., Edmonton, Alberta, Canada
R. R. Langlois	Stantec Consulting Ltd., Waterloo, Ontario, Canada
W. G. Lawrence	FM Approvals LLC, Norwood, Massachusetts, USA
R. Leduc	Marex Canada Ltd., Calgary, Alberta, Canada
R. Loiselle	Calgary, Alberta, Canada
J. H. Morrison	QPS Evaluation Services Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
V. Rowe	Marex Canada Ltd., Nanaimo, British Columbia, Canada
B. Schneider	Canary Hazardous Locations Experts, Edmonton, Alberta, Canada
D. Stochitoui	CSA Group, Toronto, Ontario, Canada
T. Tremblay	Electrical Safety Authority, Sudbury, Ontario, Canada
G. Matuvi (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 20 — Flammable liquid and gasoline dispensing, service stations, garages, bulk storage plants, finishing processes, and aircraft hangars

T. Olechna (Chair)	CSA Consumer Network, Toronto, Ontario, Canada
V. Rowe (Vice-Chair)	Marex Canada Ltd., Nanaimo, British Columbia, Canada
I. Barnes	AES Engineering Ltd., Victoria, British Columbia, Canada
R. Charbonneau	P38 Energy Inc./Budget Propane, Valleyfield, Québec, Canada
L. Coulombe	Régie du bâtiment du Québec, Québec, Québec, Canada
G. J. Drew	Cenovus Energy Inc., Calgary, Alberta, Canada
G. Lobay	CSA Consumer Network, Ottawa, Ontario, Canada
A. Milivojevic	QPS Evaluation Services Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
E. J. Power	E.J. Power Engineering, Stanhope, Prince Edward Island, Canada

D. Smith Electrical Safety Authority, Mississauga, Ontario, Canada
 G. Matuvi CSA Group, Toronto, Ontario, Canada
 (Project Manager)

Section 22 — Locations in which corrosive liquids, vapours, or excessive moisture are likely to be present

N. Hanna (Chair) Electrical Safety Authority, Mississauga, Ontario, Canada
 R. J. Kelly (Vice-Chair) Oasis Consulting, Ingleside, Ontario, Canada
 L. Cantelo Larry Cantelo Technical Training, Camrose, Alberta, Canada
 (Representing International Association of Electrical Inspectors)
 G. T. Gingara BHP, Saskatoon, Saskatchewan, Canada
 M. Khalid R.V. Anderson Associates Ltd., Toronto, Ontario, Canada
 R. R. Langlois Stantec Consulting Ltd., Waterloo, Ontario, Canada
 M. Pilato Technical Safety BC, Kelowna, British Columbia, Canada
 G. T. Walker Emery Electric, Shawnigan Lake, British Columbia, Canada
 J. Zyta Heartland Farm Mutual Insurance, Waterloo, Ontario, Canada
 U. Flynn (Project Manager) CSA Group, Toronto, Ontario, Canada

Section 24 — Patient care areas

A. Z. Tsisserev (Chair) AES Engineering Ltd., Vancouver, British Columbia, Canada
 G. Hughes (Vice-Chair) University of New Brunswick Department of Health, Fredericton, New Brunswick, Canada
 K.W. Blazey Total Power Ltd., Mississauga, Ontario, Canada
 M. Brodeur CISSS de la Montérégie-Centre, Brossard, Québec, Canada
 M. Brossoit CSA Group, Pointe-Claire, Québec, Canada
 R. Dodds Provincial Health Service Authority, Vancouver, British Columbia, Canada
 L. Ferchoff North Hill Engineering, East St. Paul, Manitoba, Canada
 J. Karman SMP Engineering, Edmonton, Alberta, Canada
 D. Madill Electrical Safety Authority, Mississauga, Ontario, Canada
 S. H. Mallikarachchi City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
 E. Smeltzer Nova Scotia Power Inc., Lower Sackville, Nova Scotia, Canada
 (Representing International Association of Electrical Inspectors)
 M. McEwen CSA Group, Toronto, Ontario, Canada
 (Project Manager)

Section 26 — Installation of electrical equipment

T. Simmons (Chair) British Columbia Institute of Technology, Burnaby, British Columbia, Canada
 R. Leduc (Vice-Chair) Marex Canada Ltd., Calgary, Alberta, Canada
 L. Coulombe Régie du bâtiment du Québec, Québec, Québec, Canada
 P. Desilets Leviton Canada, Pointe-Claire, Québec, Canada
 V. V. Gagachev Eaton, Burlington, Ontario, Canada
 F. Lohmann Canadian Home Builders' Association, Ottawa, Ontario, Canada
 M. Mihaluk Les installations électriques Auger inc., Montréal, Québec, Canada
 R. A. Nelson National Electrical Trade Council, Ancaster, Ontario, Canada
 S. Rasaratnam Schneider Electric Inc., Edmonton, Alberta, Canada
 D. Smith Electrical Safety Authority, Mississauga, Ontario, Canada

T. R. Titus	Electrical Safety Authority, New Hamburg, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
M. McEwen (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 28 — Motors and generators

M. Smith (<i>Chair</i>)	CSA Consumer Network, Kitchener, Ontario, Canada
V. V. Gagachev (<i>Vice-Chair</i>)	Eaton, Burlington, Ontario, Canada
P. Baltazart	City of Edmonton Facility Engineering Services, Edmonton, Alberta, Canada
D. Beattie	Dan Beattie Electrical Inc., Spencerville, Ontario, Canada
J. P. Boivin	CSA Group, Pointe-Claire, Québec, Canada
T. Branch	PDR Technologies Inc., Oakville, Ontario, Canada
S. G. Davies	Tidewater Midstream and Infrastructure, Calgary, Alberta, Canada
R. P. de Lhorbe	North Vancouver, British Columbia, Canada
C. Fallon	City of St. John's Planning, Engineering and Regulatory Services, St. John's, Newfoundland and Labrador, Canada
S. Finnagan	Arnprior, Ontario, Canada
E. J. Friesen	E.J. Friesen and Associates Inc., Calgary, Alberta, Canada
D. Pilon	Technical Safety Authority of Saskatchewan, Saskatoon, Saskatchewan, Canada
G. Matuvi (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 30 — Installation of lighting equipment

P. Desilets (<i>Chair</i>)	Leviton Canada, Pointe-Claire, Québec, Canada
M. Pilato (<i>Vice-Chair</i>)	Technical Safety BC, Kelowna, British Columbia, Canada
J. A. Davidson	JAD Consulting, Virden, Manitoba, Canada (<i>Representing International Association of Electrical Inspectors</i>)
T. Dinic	Electrical Safety Authority, Mississauga, Ontario, Canada
B. Keane	INNIO Waukesha, Welland, Ontario, Canada
D. Lemaux	CSA Group, Atlanta, Georgia, USA
D. Lenasi	Signify Canada Ltd., Langley, British Columbia, Canada
Q. Y. Li	Mainland Technical Services Inc., Richmond, British Columbia, Canada
M. Mihaluk	Les installations électriques Auger inc., Montréal, Québec, Canada
D. Rittenhouse	Maple Ridge, British Columbia, Canada
C. Hamza (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 32 — Fire alarm systems, smoke alarms, carbon monoxide alarms, and fire pumps

M. S. Anderson (<i>Chair</i>)	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
A. Z. Tsisserev (<i>Vice-Chair</i>)	AES Engineering Ltd., Vancouver, British Columbia, Canada
S. Aspinwall	Smith + Andersen, Toronto, Ontario, Canada
K. Bartlett	Electrical Safety Authority, Ottawa, Ontario, Canada
R. Delisle	Trade-Mark Industrial Inc., Guelph, Ontario, Canada
R. Dodds	Provincial Health Service Authority, Vancouver, British Columbia, Canada
C.J. Estereicher	Photon Electric, Cochrane, Alberta, Canada

D. Gnocchi	Tornatech Inc., Laval, Québec, Canada
S. Jenken	City of Winnipeg, Winnipeg, Manitoba, Canada
R. Kummer	Southwire Co., Carrollton, Georgia, USA
A. Pottier	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
V. R. Rochon	Roar Engineering, Mississauga, Ontario, Canada
P. Sloop	CSA Group, Cleveland, Ohio, USA
D. Weber	Canadian Fire Alarm Association, Markham, Ontario, Canada
C. J. Workman	Eaton Industries (Canada) Co., Burlington, Ontario, Canada
G. Matuvi (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 34 — Signs and outline lighting

M. Pilato (Chair)	Technical Safety BC, Kelowna, British Columbia, Canada
S.H. Mallikarachchi (Vice-Chair)	City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
L. Catton	Acme Design Service Ltd., Belle River, Ontario, Canada
F. Dabiet	Allanson International Inc., Markham, Ontario, Canada
J. A. Davidson	JAD Consulting, Virden, Manitoba, Canada (Representing International Association of Electrical Inspectors)
D. Froese	Seventy-Seven Signs Ltd., Saskatoon, Saskatchewan, Canada
D. Lemaux	CSA Group, Atlanta, Georgia, USA
D. Maron	Alberta Sign Association, Edmonton, Alberta, Canada
E. J. Power	E.J. Power Engineering, Stanhope, Prince Edward Island, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 36 — High-voltage installations

R. P. de Lhorbe (Chair)	North Vancouver, British Columbia, Canada
B. Lipson (Vice-Chair)	AES Engineering Ltd., Vancouver, British Columbia, Canada
L. Coulombe	Régie du bâtiment du Québec, Québec, Québec, Canada
E. P. Dick	Electric Power Diagnostics, Toronto, Ontario, Canada
J. Fairbrother	ITI, Saanichton, British Columbia, Canada
R. Farquharson	S&C Electric, Toronto, Ontario, Canada
R. Head	Cambridge, Ontario, Canada (Representing International Association of Electrical Inspectors)
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
O. Maita	Inter Pipeline Ltd., Edmonton, Alberta, Canada
E. Sleigh	Prime Engineering Ltd., Victoria, British Columbia, Canada
H. Tremblay	Hydro-Québec, Montréal, Québec, Canada
T. Tremblay	Electrical Safety Authority, Sudbury, Ontario, Canada
M. McEwen (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 38 — Elevators, dumbwaiters, material lifts, escalators, moving walks, lifts for persons with physical disabilities, and similar equipment

D. McColl (Chair)	Otis Canada Inc., Mississauga, Ontario, Canada
R. Grant (Vice-Chair)	Nova Scotia Department of Labour, Skills & Immigration, Sydney, Nova Scotia, Canada

A. Azhar	Schindler Elevator Corp., Randolph, New Jersey, USA
K. C. Cheong	MKC Engineering Corp., Vancouver, British Columbia, Canada
G. W. Jones	Assiniboine Community College, Brandon, Manitoba, Canada
D. Laguerre	Schindler Elevator Corp., Toronto, Ontario, Canada
D. McLellan	Technical Standards and Safety Authority (TSSA), Toronto, Ontario, Canada
S. Mercier	Régie du bâtiment du Québec, Montréal, Québec, Canada
M. Mihai	Technical Standards and Safety Authority (TSSA), Toronto, Ontario, Canada
R. Mitchell	Electrical Safety Authority, Mississauga, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
S. Mollaei	AES Engineering Ltd., Vancouver, British Columbia, Canada
M. Pedram	Modern Elevator Innovations Inc., Hamilton, Ontario, Canada
L. Yang	CSA Group, Toronto, Ontario, Canada
T. Pope	CSA Group, Toronto, Ontario, Canada

(*Senior Project Manager*)

Section 40 — Electric cranes and hoists

M. S. Anderson (<i>Chair</i>)	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
D. Mayne (<i>Vice-Chair</i>)	Government of Newfoundland and Labrador Human Resource Secretariat, St. John's, Newfoundland and Labrador, Canada
S. Bollito	Hamilton, Ontario, Canada
M. Chumkovski	QPS Evaluation Services Inc., Toronto, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
S. W. Douglas	QPS Evaluation Services Inc., Toronto, Ontario, Canada
K. Hood	Lloydminster, Alberta, Canada
M. Lodge	Gantron, Surrey, British Columbia, Canada
T. Rodrigues	Technical Standards and Safety Authority (TSSA), Mississauga, Ontario, Canada
R. Rus	O'Brien Lifting Solutions, Burlington, Ontario, Canada
L. Uruski	Manitoba Department of Labour and Immigration, Winnipeg, Manitoba, Canada
L. Yang	CSA Group, Toronto, Ontario, Canada
T. Pope	CSA Group, Toronto, Ontario, Canada

(*Senior Project Manager*)

Section 42 — Electric welders

G. Benjamin (<i>Chair</i>)	ABB Electrification Canada Inc., Dorval, Québec, Canada
R. May (<i>Vice-Chair</i>)	Surrey, British Columbia, Canada
J. P. Boivin	CSA Group, Pointe-Claire, Québec, Canada
B. Budinski	Edmonton, Alberta, Canada
K. Dunbar	Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada
D. Hisey	Drumheller, Alberta, Canada
M. Mihaluk	Les installations électriques Auger inc., Montréal, Québec, Canada
A. Pottier	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
T. Pope	CSA Group, Toronto, Ontario, Canada

(*Senior Project Manager*)

Section 44 — Theatre installations

S. Mercier (<i>Chair</i>)	Régie du bâtiment du Québec, Montréal, Québec, Canada
I. Laouini (<i>Vice-Chair</i>)	Corporation des maîtres électriciens du Québec, Montréal, Québec, Canada

B. Bennett	TO Live, Toronto, Ontario, Canada
J. Calabrese	Mississauga, Ontario, Canada
J. Feenstra	University of the Fraser Valley, Chilliwack, British Columbia, Canada
K. Hood	Lloydminster, Alberta, Canada (Representing International Association of Electrical Inspectors)
D. Lemaux	CSA Group, Atlanta, Georgia, USA
M. Mihaluk	Les installations électriques Auger inc., Montréal, Québec, Canada
U. Flynn (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 46 — Emergency power supply, unit equipment, exit signs, and life safety systems

A. Z. Tsisserev (Chair)	AES Engineering Ltd., Vancouver, British Columbia, Canada
M. S. Anderson (Vice-Chair)	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
S. Aspinwall	Smith + Andersen, Toronto, Ontario, Canada
G. Benjamin	ABB Electrification Canada Inc., Dorval, Québec, Canada
K. W. Blazey	Total Power Ltd., Mississauga, Ontario, Canada
S. C. Bygrave	Stantec Consulting Ltd., Dartmouth, Nova Scotia, Canada
R. Dodds	Provincial Health Service Authority, Vancouver, British Columbia, Canada
T. Fazzari	Mohawk College, Stoney Creek, Ontario, Canada
D. Lemaux	CSA Group, Atlanta, Georgia, USA
D. Madill	Electrical Safety Authority, Mississauga, Ontario, Canada
W. L. McAllister	City of Camrose, Camrose, Alberta, Canada
R. A. Nelson	National Electrical Trade Council, Ancaster, Ontario, Canada
M. Rendulic	Winnipeg School Division Building Department, Winnipeg, Manitoba, Canada
M. Staples	City of Victoria, Victoria, British Columbia, Canada
M. McEwen (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 52 — Diagnostic imaging installations

N. Hanna (Chair)	Electrical Safety Authority, Mississauga, Ontario, Canada
D. Langlois (Vice-Chair)	CSA Group, Toronto, Ontario, Canada
M. Brossoit	CSA Group, Pointe-Claire, Québec, Canada
J. C. Einarson	Whitehorse, Yukon, Canada
W. Wetmore	QPS Evaluation Services Inc., Toronto, Ontario, Canada
U. Flynn (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 54 — Community antenna distribution and radio and television installations

S. M. Turcot (Chair)	Bell Canada, Montréal, Québec, Canada
A. Van Steinburg (Vice-Chair)	International Brotherhood of Electrical Workers, Abbotsford, British Columbia, Canada
T. Chiu	Stantec Consulting Ltd., Vancouver, British Columbia, Canada
P. Olders	G6 Systems, Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
T. Walker	TELUS, Calgary, Alberta, Canada
U. Flynn (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 56 — Optical fiber cables

S. M. Turcot (<i>Chair</i>)	Bell Canada, Montréal, Québec, Canada
A. Van Steinburg (<i>Vice-Chair</i>)	International Brotherhood of Electrical Workers, Abbotsford, British Columbia, Canada
I. Albanese	TELUS, Burnaby, British Columbia, Canada
T. Driscoll	OBIEC Consulting Ltd., Calgary, Alberta, Canada
S. Finnagan	Arnprior, Ontario, Canada
S. Hall	CSA Group, Toronto, Ontario, Canada
P. Olders	G6 Systems, Inc., Toronto, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
V. Rowe	Marex Canada Ltd., Nanaimo, British Columbia, Canada
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
U. Flynn (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 58 — Passenger ropeways and similar equipment

W. L. Sparks (<i>Chair</i>)	Doppelmayr Canada Ltd., Kelowna, British Columbia, Canada
S. Mercier (<i>Vice-Chair</i>)	Régie du bâtiment du Québec, Montréal, Québec, Canada
D. Bruce	Alberta Municipal Affairs, Edmonton, Alberta, Canada
M. Chumkovski	QPS Evaluation Services Inc., Toronto, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
V. C. Lightfoot	Cranbrook, British Columbia, Canada
P. McDermott	Technical Standards and Safety Authority (TSSA), Toronto, Ontario, Canada
D. Uddenberg	PBX Engineering Ltd., Vancouver, British Columbia, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 60 — Electrical communication systems

S. M. Turcot (<i>Chair</i>)	Bell Canada, Montréal, Québec, Canada
R. Grant (<i>Vice-Chair</i>)	Nova Scotia Department of Labour, Skills & Immigration, Sydney, Nova Scotia, Canada
S. Bent	Nova Scotia Power Inc., Kingston, Nova Scotia, Canada (<i>Representing International Association of Electrical Inspectors</i>)
P. Desilets	Leviton Canada, Pointe-Claire, Québec, Canada
S. Finnagan	Arnprior, Ontario, Canada
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada
T. Walker	TELUS, Calgary, Alberta, Canada
S. Wells	Digital Government and Service NL, Gander, Newfoundland and Labrador, Canada
U. Flynn (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 62 — Fixed electric heating systems

T. S. Driscoll (<i>Chair</i>)	OBIEC Consulting Ltd., Calgary, Alberta, Canada
J. Turner (<i>Vice-Chair</i>)	Swansea Consulting, Toronto, Ontario, Canada
L. Ahmadyar	nVent Thermal Canada Ltd., Edmonton, Alberta, Canada
R. Barth	Thermon Inc., San Marcos, Texas, USA
G. Gone	Electrical Safety Authority, Mississauga, Ontario, Canada
J. Bylinski	Stelpro Design Inc., St-Bruno, Québec, Canada

J. Calabrese	Mississauga, Ontario, Canada
T. De Francesco	Aeromation Inc., Vancouver, British Columbia, Canada
P. D. den Bakker	Shell Canada Ltd., Calgary, Alberta, Canada
G. Gagnon	Schluter Systems (Canada) Inc., Ste-Anne-de-Bellevue, Québec, Canada
T. Hamden	Hubbell Canada, Pickering, Ontario, Canada
M. Humphries	CSA Group, Toronto, Ontario, Canada
T. Jackson	CSA Group, Cleveland, Ohio, USA
R. Loiseau	Calgary, Alberta, Canada
D. W. McCallum	PCL Industrial Management, Edmonton, Alberta, Canada
J. Overton	Technical Safety BC, Port Alberni, British Columbia, Canada (<i>Representing International Association of Electrical Inspectors</i>)
E. D. Stephens	Emerson, Elmira, Ontario, Canada
L. Tiracchia (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 64 — Renewable energy systems, energy production systems, energy storage systems, and batteries

T. Simmons (<i>Chair</i>)	British Columbia Institute of Technology, Burnaby, British Columbia, Canada
S. W. Douglas (<i>Vice-Chair</i>)	QPS Evaluation Services Inc., Toronto, Ontario, Canada
T. Buchal	Independent Consultant, Oak Hill, New York, USA
S. Eng	Enviro-Energy Technologies Inc., Markham, Ontario, Canada
T. K. Kjartanson	Manitoba Hydro, Winnipeg, Manitoba, Canada
P. Lourdu	e2 Engineering, Victoria, British Columbia, Canada
D. Madill	Electrical Safety Authority, Mississauga, Ontario, Canada
J. Pinter	Pinter Electrical Consulting Inc., Lake Country, British Columbia, Canada
D. B. Pollock	Electrical Safety Authority, Ilderton, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
A. Pottier	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
E. W. Smiley	Reid Wylde Engineering Ltd., Courtenay, British Columbia, Canada
M. McEwen (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 66 — Amusement parks, midways, carnivals, film and TV sets, TV remote broadcasting locations, and travelling shows

S. Mercier (<i>Chair</i>)	Régie du bâtiment du Québec, Montréal, Québec, Canada
A. Wanuch (<i>Vice-Chair</i>)	KRE Electric Ltd., Mississauga, Ontario, Canada
J. Calabrese	Mississauga, Ontario, Canada
R. Holden	MBS Equipment Co. Canada, Burnaby, British Columbia, Canada
K. Hood	Lloydminster, Alberta, Canada (<i>Representing International Association of Electrical Inspectors</i>)
J. Porter	Toronto, Ontario, Canada
A. Tully	City of Vancouver, Vancouver, British Columbia, Canada
K. S. Woods	IATSE Local 891, Port Moody, British Columbia, Canada
U. Flynn (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 68 — Pools, tubs, and spas

K. Dunbar (<i>Chair</i>)	Government of the Northwest Territories, Yellowknife, Northwest Territories, Canada
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M. S. Anderson (<i>Vice-Chair</i>)	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
S. W. Douglas	QPS Evaluation Services Inc., Toronto, Ontario, Canada
J. Gurney	Hydro One Networks Inc., Toronto, Ontario, Canada
D. Lemaux	CSA Group, Atlanta, Georgia, USA
T. Minna	EPI Electrical Contractors, Brampton, Ontario, Canada
I. Robinson	City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
L. B. Ross	Newmarket, Ontario, Canada
D. Smith	Electrical Safety Authority, Mississauga, Ontario, Canada
A. Thornley	City of Vancouver, Vancouver, British Columbia, Canada
U. Flynn (<i>Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 70 — Electrical requirements for factory-built relocatable structures and non-relocatable structures

J. C. Potts (<i>Chair</i>)	Nunavut Department of Community and Government Services, Iqaluit, Nunavut, Canada
H. Lang (<i>Vice-Chair</i>)	Government of Yukon, Whitehorse, Yukon, Canada
M. S. Anderson	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
J. C. Einarson	Whitehorse, Yukon, Canada
J. Hermary	Nickel Electric Ltd., Brandon, Manitoba, Canada
K. D. Maynard	Canadian Home Builders' Association, Ottawa, Ontario, Canada
R. W. Morin	Grafton, Ontario, Canada (<i>Representing International Association of Electrical Inspectors</i>)
V. Thielmann	Nova 3 Engineering Ltd., Winnipeg, Manitoba, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 72 — Mobile home and recreational vehicle parks

R. Leduc (<i>Chair</i>)	Marex Canada Ltd., Calgary, Alberta, Canada
J. C. Potts (<i>Vice-Chair</i>)	Nunavut Department of Community and Government Services, Iqaluit, Nunavut, Canada
M. S. Anderson	Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
J. C. Einarson	Whitehorse, Yukon, Canada
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
K. Hood	Lloydminster, Alberta, Canada
M. Pace	Electrical Safety Authority, Mississauga, Ontario, Canada
M. Staples	City of Victoria, Victoria, British Columbia, Canada
T. Pope (<i>Senior Project Manager</i>)	CSA Group, Toronto, Ontario, Canada

Section 74 — Airport installations

C. C. Cormier (<i>Chair</i>)	Nova Scotia Power, Halifax, Nova Scotia, Canada
S. W. Douglas (<i>Vice-Chair</i>)	QPS Evaluation Services Inc., Toronto, Ontario, Canada
E. J. Alf	Transport Canada — AARTAE, Ottawa, Ontario, Canada

G. W. Bradbury	BTE Engineering Technology Services, St. Petersburg, Florida, USA (Representing International Association of Electrical Inspectors)
R. Chernish	Department of National Defence, Winnipeg, Manitoba, Canada
D. Fedyshen	Plains Midstream Canada, Olds, Alberta, Canada
G. T. Gingara	BHP, Saskatoon, Saskatchewan, Canada
G. Kooner	Vancouver Airport Authority, Richmond, British Columbia, Canada
R. Larivée	Avia Rupta Solutions Inc., Laval, Québec, Canada
S. H. Mallikarachchi	City of Winnipeg Planning, Property and Development, Winnipeg, Manitoba, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 76 — Temporary wiring

J. Rowley (Chair)	City of Vancouver, Vancouver, British Columbia, Canada
S. W. Douglas (Vice-Chair)	QPS Evaluation Services Inc., Toronto, Ontario, Canada (Representing International Association of Electrical Inspectors)
G. Bone	Electrical Safety Authority, Mississauga, Ontario, Canada
J. Calabrese	Mississauga, Ontario, Canada
T. K. Kjartanson	Manitoba Hydro, Winnipeg, Manitoba, Canada
R. Kummer	Southwire Co., Carrollton, Georgia, USA
S. Nair	WorkSafe BC, Richmond, British Columbia, Canada
B. O'Donnell	AC Powerline Construction, Pickering, Ontario, Canada
M. McEwen (Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 78 — Marine wharves, docking facilities, fixed and floating piers, and boathouses

A. Pottier (Chair)	Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
D. Mayne (Vice-Chair)	Government of Newfoundland and Labrador Human Resource Secretariat, St. John's, Newfoundland and Labrador, Canada
W. J. Burr	Burr and Associates, Campbell River, British Columbia, Canada
P. Daigle	New Brunswick Department of Justice and Public Safety, Miramichi, New Brunswick, Canada
T. Dinic	Electrical Safety Authority, Mississauga, Ontario, Canada
C. J. Estereicher	Photon Electric, Cochrane, Alberta, Canada
D. J. Heron	Heron Electrical Consulting Inc., Worthington, Ontario, Canada
D. Kalles	Bruce Power, Tiverton, Ontario, Canada
M. L. Vollmer	Michael Vollmer Yacht Design Inc., Burlington, Ontario, Canada
T. Pope (Senior Project Manager)	CSA Group, Toronto, Ontario, Canada

Section 80 — Cathodic protection

H. Lang (Chair)	Government of Yukon, Whitehorse, Yukon, Canada
D. L. Pickering (Vice-Chair)	City of Calgary, Calgary, Alberta, Canada
R. J. Maynard	Aurora Corrosion Control, a division of Aurora Environmental Consulting Ltd., Calgary, Alberta, Canada
D. Schill	SaskPower, Regina, Saskatchewan, Canada (Representing International Association of Electrical Inspectors)
A. Z. Tsisserev	AES Engineering Ltd., Vancouver, British Columbia, Canada

R. G. Wakelin Gull River Engineering Inc., Brooklin, Ontario, Canada
 T. Pope CSA Group, Toronto, Ontario, Canada
 (Senior Project Manager)

Section 84 — Interconnection of electric power production sources

S. W. Douglas (Chair) QPS Evaluation Services Inc., Toronto, Ontario, Canada
 G. W. Jones (Vice-Chair) Assiniboine Community College, Brandon, Manitoba, Canada
 M. S. Anderson Technical Safety Authority of Saskatchewan, Regina, Saskatchewan, Canada
 D. Desrosiers Institute of Electrical Power Engineering, Montréal, Québec, Canada
 E. P. Dick Electric Power Diagnostics, Toronto, Ontario, Canada
 D. J. Heron Heron Electrical Consulting Inc., Worthington, Ontario, Canada
 B. Lipson AES Engineering Ltd., Vancouver, British Columbia, Canada
 A. Mak WorleyParsons Canada, Edmonton, Alberta, Canada
 D. Mascarenhas Brampton, Ontario, Canada
 A. Pottier Underwriters Laboratories of Canada Inc., Toronto, Ontario, Canada
 J. C. Potts Nunavut Department of Community and Government Services, Iqaluit, Nunavut, Canada
 (Representing International Association of Electrical Inspectors)
 V. Rowe Marex Canada Ltd., Nanaimo, British Columbia, Canada
 T. Simmons British Columbia Institute of Technology, Burnaby, British Columbia, Canada
 T. Pope CSA Group, Toronto, Ontario, Canada
 (Senior Project Manager)

Section 86 — Electric vehicle charging systems

P. Desilets (Chair) Leviton Canada, Pointe-Claire, Québec, Canada
 D. Mascarenhas (Vice-Chair) Brampton, Ontario, Canada
 D. Chandler AES Engineering, Vancouver, British Columbia, Canada
 D. Corbeil Electric Vehicle Association of Québec, Laval, Québec, Canada
 J. Côté Hydro-Québec, Montréal, Québec, Canada
 S. Dallas Toronto Electric, Electric Mobility Canada, Toronto, Ontario, Canada
 P. R. Hinse University of Ontario Institute of Technology, Oshawa, Ontario, Canada
 I. Laouini Corporation des maîtres électriciens du Québec, Montréal, Québec, Canada
 C. Marquis AddÉnergie, Québec, Québec, Canada
 T. W. Odell Toronto Hydro-Electric System Ltd., Toronto, Ontario, Canada
 J. Overton Technical Safety BC, Port Alberni, British Columbia, Canada
 J. C. Potts Department of Community and Government Services, Government of Nunavut, Iqaluit, Nunavut, Canada
 (Representing International Association of Electrical Inspectors)
 J. E. Tarchinski General Motors Co., Warren, Michigan, USA
 A. Z. Tsisserev AES Engineering Ltd., Vancouver, British Columbia, Canada
 R. Yousef Electrical Safety Authority, Mississauga, Ontario, Canada
 U. Khan (Project Manager) CSA Group, Toronto, Ontario, Canada

Appendix C

T. Olechna (Chair) CSA Consumer Network, Toronto, Ontario, Canada

Appendix D

I. Müller (*Chair*) American Wire Group, Lindsay, Ontario, Canada

Appendix F

T. S. Driscoll (*Chair*) OBIEC Consulting Ltd., Calgary, Alberta, Canada

Appendix G

A. Z. Tsisserev (*Chair*) AES Engineering Ltd., Vancouver, British Columbia, Canada

Appendix J — Annex J18

T. S. Driscoll (*Chair*) OBIEC Consulting Ltd., Calgary, Alberta, Canada

Appendix J — Annex J20

T. Olechna CSA Consumer Network, Toronto, Ontario, Canada

Appendix L

T. S. Driscoll (*Chair*) OBIEC Consulting Ltd., Calgary, Alberta, Canada

Preface

This twenty-sixth edition of the *Canadian Electrical Code, Part I*, was approved by the Committee on the *Canadian Electrical Code, Part I*, and by the Regulatory Authority Committee at their June 2023 meetings. This twenty-sixth edition supersedes the previous editions published in 2021, 2018, 2015, 2012, 2009, 2006, 2002, 1998, 1994, 1990, 1986, 1982, 1978, 1975, 1972, 1969, 1966, 1962, 1958, 1953, 1947, 1939, 1935, 1930, and 1927.

This edition contains important revisions to many Sections. Section [64](#) contains major revisions for energy storage and renewable energy systems, including a new Subsection for residential occupancies and updates to photovoltaic system requirements. Several important changes appear in Section [68](#), including new requirements for disconnecting means and bonding conductive pool infrastructure.

Section [66](#) now requires ground fault circuit interrupter protection for cords connected to receptacles placed in temporary installations such as tents for outdoor functions.

Other significant revisions in this edition include the following:

- voltage definitions for dc circuit voltages have been revised in Section [0](#);
- Section [2](#) sees the addition of new requirements for reduction of arcing fault clearing times and clarification on use of ingress protection designations;
- in addition to traditional AWG and kcmil sizes, use of conductors sized in mm² is now recognized through revisions to Section [4](#) and a new table;
- load calculations for installations with electric vehicle supply equipment have been revised in Section [8](#) and simplified through the deletion of Table [38](#);
- many new products and updates to wiring methods are recognized in Section [12](#), including sag and span requirements for overhead installations and new Rules for non-metallic jacketed cable;
- sealing requirements have been substantially revised in Section [18](#) and Annex [J18](#);
- Section [36](#) now features Rules for installation of high-voltage couplers (i.e., devices that provide a means to repeatedly join and separate portable power cables);
- Table [11](#) has been reformatted into two new tables ([11A](#) and [11B](#)) and made easier to use through a layout similar to Table [19](#);
- Annexes A.1 and A.2 of Appendix [A](#) and the Index have been reinstated;
- Appendix [K](#) has been deleted; and
- the word “allowable” has been removed from “allowable ampacities” throughout most of the Code.

Many of the changes in this edition were developed by cross-functional working groups. Their work is gratefully acknowledged.

This edition of the *Canadian Electrical Code, Part I*, is dedicated to the life and memory of our friend and colleague, Pierre Desilets, whose dedication and contributions helped make the publication of this document possible.

General arrangement

The Code is divided into numbered Sections, each covering some main division of the work. Sections [0](#) to [16](#) and [26](#) are considered general Sections, and the other Sections supplement or amend the general Sections. The Sections are divided into numbered Rules, with captions for easy reference, as follows:

- a) **Numbering system** — With the exception of Section [38](#), even numbers have been used throughout to identify Sections and Rules. Rule numbers consist of the Section number separated by a hyphen from the 3- or 4-digit figure. The intention in general is that odd numbers may be used for new Rules required by interim revisions. Due to the introduction of some new Rules and the deletion of some existing Rules during the revision of each edition, the Rule numbers for any particular requirement are not always the same in successive editions.