

Instructions:

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1. Print these pages.
2. Circle the correct answers and transfer them to the [answer sheet](#).
3. Page down to the last page for the [verification forms](#) and mailing instructions.
4. Use the included 2014 article definitions as your reference materials.
5. Questions are in straight order and in easy to complete mini-sections throughout the quiz.

Course: 17124 2014 NEC Articles Definitions PART 2

This course is valid for these credentials:

| Credential Description | Cred Code | Credit Hours |
|------------------------------------|------------------|---------------------|
| Registered/Beginner Electrician | BE | 8.0 |
| Commercial Electrical Inspector | CEI | 8.0 |
| Industrial Journeyman Electrician | IJE | 8.0 |
| Journeyman Electrician | JE | 8.0 |
| Master Electrician | ME | 8.0 |
| Residential Journeyman Electrician | RJE | 8.0 |
| Residential Master Electrician | RME | 8.0 |
| UDC-Electrical Inspector | UEI | 8.0 |

2014 NEC Articles Definitions Part 2

550.2 Definitions.

Manufactured Home. A structure, transportable in one or more sections, that, in the traveling mode, is 2.4 m (8 body ft.) or more in width or 12.2 m (40 body-ft) or more in length, or, when erected on site, is 29.7 m² (320 ft²) or more and that is built on a permanent chassis and designed to be used as a dwelling, with or without a permanent foundation, when connected therein. The term *manufactured home* includes any structure that meets all the provisions of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency, and except that such term does not include any self-propelled recreational vehicle. Calculations used to determine the number of square meters (square feet) in a structure are based on the structure’s exterior dimensions, measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinets, and other projections containing interior space but do not include bay windows. For the purpose of this *Code* and unless otherwise indicated, the term *mobile home* includes manufactured homes.

Mobile Home. A factory-assembled structure or structures transportable in one or more sections that are built on a permanent chassis and designed to be used as a dwelling without a permanent foundation where connected to the required utilities and that include the plumbing, heating, air-conditioning, and electrical systems contained therein. For the purpose of this *Code* and unless otherwise indicated, the term *mobile home* includes manufactured homes.

Mobile Home Accessory Building or Structure. Any awning, cabana, ramada, storage cabinet, carport, fence, windbreak, or porch established for the use of the occupant of the mobile home on a mobile home lot.

Mobile Home Lot. A designated portion of a mobile home park designed for the accommodation of one mobile home and its accessory buildings or structures for the exclusive use of its occupants.

Mobile Home Park. A contiguous parcel of land that is used for the accommodation of occupied mobile homes.

Mobile Home Service Equipment. The equipment containing the disconnecting means, overcurrent protective devices, and receptacles or other means for connecting a mobile home feeder assembly.

1. A factory-assembled structure or structures transportable in one or more sections that are built on a permanent chassis and designed to be used as a dwelling without a permanent foundation where connected to the required utilities and that include the plumbing, heating, air-conditioning, and electrical systems contained therein. For the purpose of this *Code* and unless otherwise indicated, the term *mobile home* includes manufactured homes defines:

- a. Mobile Home Service Equipment
 - b. Mobile Home Park
 - c. Mobile Home Lot
 - d. Mobile Home Accessory Building or Structure
 - e. Mobile Home
2. Any awning, cabana, ramada, storage cabinet, carport, fence, windbreak, or porch established for the use of the occupant of the mobile home on a mobile home lot defines:
- a. Mobile Home Service Equipment
 - b. Mobile Home Park
 - c. Mobile Home Lot
 - d. Mobile Home Accessory Building or Structure
 - e. Mobile Home
3. A designated portion of a mobile home park designed for the accommodation of one mobile home and its accessory buildings or structures for the exclusive use of its occupant defines:
- a. Mobile Home Service Equipment
 - b. Mobile Home Park
 - c. Mobile Home Lot
 - d. Mobile Home Accessory Building or Structures
 - e. Mobile Home
4. A contiguous parcel of land that is used for the accommodation of occupied mobile homes defines:
- a. Mobile Home Service Equipment
 - b. Mobile Home Park
 - c. Mobile Home Lot
 - d. Mobile Home Accessory Building or Structure
 - e. Mobile Home
5. The equipment containing the disconnecting means, overcurrent protective devices, and receptacles or other means for connecting a mobile home feeder assembly defines:
- a. Mobile Home Service Equipment
 - b. Mobile Home Park
 - c. Mobile Home Lot
 - d. Mobile Home Accessory Building or Structure
 - e. Mobile Home
6. Manufactured Home. A structure, transportable in one or more sections, that, in the traveling mode, is 2.4 m (8 body ft.) or more in width or 12.2 m (40 body-ft.) or more in length, or, when erected on site, is 29.7 m² (320 ft²) or more and that is built on a permanent chassis and designed to be used as a dwelling, _____ a permanent foundation, when connected therein.
- a. with
 - b. without
 - c. both a & b
 - d. none of the above
7. The term *manufactured home* includes any structure that meets all the provisions of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency, and except that such term _____ any self-propelled recreational vehicle.
- a. does not include
 - b. does include
 - c. depends on
 - d. none of the above
8. Manufactured Home. Calculations used to determine the number of square feet in a structure are based on the structure's _____ dimensions, measured at the largest horizontal projections when erected on site.
- a. interior
 - b. exterior
 - c. both a & b
 - d. none of the above

9. Manufactured Home. These dimensions include all expandable rooms, cabinets, and other projections containing interior space but do not include _____.

- a. bedroom windows
- b. bay windows
- c. picture windows
- d. all of the above

10. Manufactured Home. For the purpose of this *Code* and unless otherwise indicated, the term *mobile home* includes _____.

- a. manufactured dwelling
- b. manufactured homes
- c. manufactured housing
- d. all of the above

551.2 Definitions.

Air-Conditioning or Comfort-Cooling Equipment. All of that equipment intended or installed for the purpose of processing the treatment of air so as to control simultaneously or individually its temperature, humidity, cleanliness, and distribution to meet the requirements of the conditioned space.

Appliance, Fixed. An appliance that is fastened or otherwise secured at a specific location.

Appliance, Portable. An appliance that is actually moved or can easily be moved from one place to another in normal use. Informational Note: For the purpose of this article, the following major appliances, other than built-in, are considered portable if cord connected: refrigerators, range equipment, clothes washers, dishwashers without booster heaters, or other similar appliances.

Appliance, Stationary. An appliance that is not easily moved from one place to another in normal use.

Camping Trailer. A vehicular portable unit mounted on wheels and constructed with collapsible partial side walls that fold for towing by another vehicle and unfold at the campsite to provide temporary living quarters for recreational, camping, or travel use.

Converter. A device that changes electrical energy from one form to another, as from alternating current to direct current.

Dead Front (as applied to switches, circuit breakers, switchboards, and distribution panelboards).

Designed, constructed, and installed so that no current-carrying parts are normally exposed on the front.

Disconnecting Means. The necessary equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors in a recreational vehicle and intended to constitute the means of cutoff for the supply to that recreational vehicle.

Distribution Panelboard. A single panel or group of panel units designed for assembly in the form of a single panel, including buses, and with or without switches and/or automatic overcurrent protective devices for the control of light, heat, or power circuits of small individual as well as aggregate capacity; designed to be placed in a cabinet or cutout box placed in or against a wall or partition and accessible only from the front.

Frame. Chassis rail and any welded addition thereto of metal thickness of 1.35 mm (0.053 in.) or greater.

Low Voltage. An electromotive force rated 24 volts, nominal, or less.

Motor Home. A vehicular unit designed to provide temporary living quarters for recreational, camping, or travel use built on or permanently attached to a self-propelled motor vehicle chassis or on a chassis cab or van that is an integral part of the completed vehicle. (*See Recreational Vehicle.*)

Power-Supply Assembly. The conductors, including ungrounded, grounded, and equipment grounding conductors, the connectors, attachment plug caps, and all other fittings, grommets, or devices installed for the purpose of delivering energy from the source of electrical supply to the distribution panel within the recreational vehicle.

Recreational Vehicle. A vehicular-type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle. The basic entities are travel trailer, camping trailer, truck camper, and motor home.

Recreational Vehicle Park. A plot of land upon which two or more recreational vehicle sites are located, established, or maintained for occupancy by recreational vehicles of the general public as temporary living quarters for recreation or vacation purposes.

Recreational Vehicle Site. A plot of ground within a recreational vehicle park set aside for the accommodation of a recreational vehicle on a temporary basis. It can be used as either a recreational vehicle site or as a camping unit site.

Recreational Vehicle Site Feeder Circuit Conductors. The conductors from the park service equipment to the recreational vehicle site supply equipment.

Recreational Vehicle Site Supply Equipment. The necessary equipment, usually a power outlet, consisting of a circuit breaker or switch and fuse and their accessories, located near the point of entrance of supply conductors to a recreational vehicle site and intended to constitute the disconnecting means for the supply to that site.

Recreational Vehicle Stand. That area of a recreational vehicle site intended for the placement of a recreational vehicle.

Travel Trailer. A vehicular unit, mounted on wheels, designed to provide temporary living quarters for recreational, camping, or travel use, of such size or weight as not to require special highway movement permits when towed by a motorized vehicle, and of gross trailer area less than 30 m² (320 ft²). **Truck Camper.** A portable unit constructed to provide temporary living quarters for recreational, travel, or camping use, consisting of a roof, floor, and sides, designed to be loaded onto and unloaded from the bed of a pickup truck. **552.2**

Definition. (See Articles 100, 550, and 551 for additional definitions.)

Park Trailer. A unit that is built on a single chassis mounted on wheels and has a gross trailer area not exceeding 37 m² (400 ft²) in the set-up mode.

553.2 Definition.

Floating Building. A building unit, as defined in Article 100, that floats on water, is moored in a permanent location, and has a premises wiring system served through connection by permanent wiring to an electrical supply system not located on the premises.

11. All of that equipment intended or installed for the purpose of processing the treatment of air so as to control simultaneously or individually its temperature, humidity, cleanliness, and distribution to meet the requirements of the conditioned space defines:

- a. Air-Conditioning
- b. Comfort-Cooling Equipment
- c. both a & b
- d. none of the above

12. An appliance that is fastened or otherwise secured at a specific location defines:

- a. Power-Supply Assembly
- b. Frame
- c. Appliance, Stationary
- d. Appliance, Portable
- e. Appliance, Fixed

13. An appliance that is actually moved or can easily be moved from one place to another in normal use.

Informational Note: For the purpose of this article, the following major appliances, other than built-in, are considered portable if cord connected: refrigerators, range equipment, clothes washers, dishwashers without booster heaters, or other similar appliances defines:

- a. Power-Supply Assembly
- b. Frame
- c. Appliance, Stationary
- d. Appliance, Portable
- e. Appliance, Fixed

14. An appliance that is not easily moved from one place to another in normal use defines:

- a. Power-Supply Assembly
- b. Frame
- c. Appliance, Stationary
- d. Appliance, Portable
- e. Appliance, Fixed

15. Chassis rail and any welded addition thereto of metal thickness of 1.35 mm (0.053 in.) or greater defines:

- a. Power-Supply Assembly
- b. Frame

- c. Appliance, Stationary
 - d. Appliance, Portable
 - e. Appliance, Fixed
16. The conductors, including ungrounded, grounded, and equipment grounding conductors, the connectors, attachment plug caps, and all other fittings, grommets, or devices installed for the purpose of delivering energy from the source of electrical supply to the distribution panel within the recreational vehicle defines:
- a. Power-Supply Assembly
 - b. Frame
 - c. Appliance, Stationary
 - d. Appliance, Portable
 - e. Appliance, Fixed
17. A device that changes electrical energy from one form to another, as from alternating current to direct current defines:
- a. Low Voltage
 - b. Distribution Panelboard
 - c. Disconnecting Means
 - d. Dead Front
 - e. Converter
18. Designed, constructed, and installed so that no current-carrying parts are normally exposed on the front defines:
- a. Low Voltage
 - b. Distribution Panelboard
 - c. Disconnecting Means
 - d. Dead Front
 - e. Converter
19. The necessary equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors in a recreational vehicle and intended to constitute the means of cutoff for the supply to that recreational vehicle defines:
- a. Low Voltage
 - b. Distribution Panelboard
 - c. Disconnecting Means
 - d. Dead Front
 - e. Converter
20. A single panel or group of panel units designed for assembly in the form of a single panel, including buses, and with or without switches and/or automatic overcurrent protective devices for the control of light, heat, or power circuits of small individual as well as aggregate capacity; designed to be placed in a cabinet or cutout box placed in or against a wall or partition and accessible only from the front defines:
- a. Low Voltage
 - b. Distribution Panelboard
 - c. Disconnecting Means
 - d. Dead Front
 - e. Converter
21. An electromotive force rated 24 volts, nominal, or less defines:
- a. Low Voltage
 - b. Distribution Panelboard
 - c. Disconnecting Means
 - d. Dead Front
 - e. Converter
22. A vehicular portable unit mounted on wheels and constructed with collapsible partial side walls that fold for towing by another vehicle and unfold at the campsite to provide temporary living quarters for recreational, camping, or travel use defines:
- a. Camping Trailer
 - b. Recreational Vehicle
 - c. Travel Trailer

- d. Truck Camper
- e. Park Trailer

23. A vehicular-type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle. The basic entities are travel trailer, camping trailer, truck camper, and motor home defines:

- a. Camping Trailer
- b. Recreational Vehicle
- c. Travel Trailer
- d. Truck Camper
- e. Park Trailer

24. A vehicular unit, mounted on wheels, designed to provide temporary living quarters for recreational, camping, or travel use, of such size or weight as not to require special highway movement permits when towed by a motorized vehicle, and of gross trailer area less than 30 m² (320 ft²) defines:

- a. Camping Trailer
- b. Recreational Vehicle
- c. Travel Trailer
- d. Truck Camper
- e. Park Trailer

25. A portable unit constructed to provide temporary living quarters for recreational, travel, or camping use, consisting of a roof, floor, and sides, designed to be loaded onto and unloaded from the bed of a pickup truck defines:

- a. Camping Trailer
- b. Recreational Vehicle
- c. Travel Trailer
- d. Truck Camper
- e. Park Trailer

26. A unit that is built on a single chassis mounted on wheels and has a gross trailer area not exceeding 37 m² (400 ft²) in the set-up mode defines:

- a. Camping Trailer
- b. Recreational Vehicle
- c. Travel Trailer
- d. Truck Camper
- e. Park Trailer

27. A vehicular unit designed to provide temporary living quarters for recreational, camping, or travel use built on or permanently attached to a self-propelled motor vehicle chassis or on a chassis cab or van that is an integral part of the completed vehicle defines:

- a. Recreational Vehicle Stand
- b. Floating Building
- c. Motor Home

28. A building unit, as defined in Article 100, that floats on water, is moored in a permanent location, and has a premises wiring system served through connection by permanent wiring to an electrical supply system not located on the premises defines:

- a. Recreational Vehicle Stand
- b. Floating Building
- c. Motor Home

29. That area of a recreational vehicle site intended for the placement of a recreational vehicle defines:

- a. Recreational Vehicle Stand
- b. Floating Building
- c. Motor Home

30. A plot of land upon which two or more recreational vehicle sites are located, established, or maintained for occupancy by recreational vehicles of the general public as temporary living quarters for recreation or vacation purposes defines:

- a. Recreational Vehicle Park
- b. Recreational Vehicle Site

- c. Recreational Vehicle Site Feeder Circuit Conductors
 - d. Recreational Vehicle Site Supply Equipment
31. A plot of ground within a recreational vehicle park set aside for the accommodation of a recreational vehicle on a temporary basis. It can be used as either a recreational vehicle site or as a camping unit site defines:
- a. Recreational Vehicle Park
 - b. Recreational Vehicle Site
 - c. Recreational Vehicle Site Feeder Circuit Conductors
 - d. Recreational Vehicle Site Supply Equipment
32. The conductors from the park service equipment to the recreational vehicle site supply equipment defines:
- a. Recreational Vehicle Park
 - b. Recreational Vehicle Site
 - c. Recreational Vehicle Site Feeder Circuit Conductors
 - d. Recreational Vehicle Site Supply Equipment
33. The necessary equipment, usually a power outlet, consisting of a circuit breaker or switch and fuse and their accessories, located near the point of entrance of supply conductors to a recreational vehicle site and intended to constitute the disconnecting means for the supply to that site defines:
- a. Recreational Vehicle Park
 - b. Recreational Vehicle Site
 - c. Recreational Vehicle Site Feeder Circuit Conductors
 - d. Recreational Vehicle Site Supply Equipment

555.2 Definitions.

Electrical Datum Plane. The electrical datum plane is defined as follows:

- (1) In land areas subject to tidal fluctuation, the electrical datum plane is a horizontal plane 606 mm (2 ft) above the highest tide level for the area occurring under normal circumstances, that is, highest high tide.
- (2) In land areas not subject to tidal fluctuation, the electrical datum plane is a horizontal plane 606 mm (2 ft) above the highest water level for the area occurring under normal circumstances.
- (3) The electrical datum plane for floating piers and landing stages that are (a) installed to permit rise and fall response to water level, without lateral movement, and (b) that are so equipped that they can rise to the datum plane established for (1) or (2), is a horizontal plane 762 mm (30 in.) above the water level at the floating pier or landing stage and a minimum of 305 mm (12 in.) above the level of the deck.

600.2 Definitions.

Electric-Discharge Lighting. Systems of illumination utilizing fluorescent lamps, high-intensity discharge (HID) lamps, or neon tubing.

LED Sign Illumination System. A complete lighting system for use in signs and outline lighting consisting of light emitting diode (LED) light sources, power supplies, wire, and connectors to complete the installation.

Neon Tubing. Electric-discharge luminous tubing that is manufactured into shapes to illuminate signs, form letters, parts of letters, skeleton tubing, outline lighting, other decorative elements, or art forms and filled with various inert gases.

Section Sign. A sign or outline lighting system, shipped as subassemblies, that requires field-installed wiring between the subassemblies to complete the overall sign. The subassemblies are either physically joined to form a single sign unit or are installed as separate remote parts of an overall sign.

Sign Body. A portion of a sign that may provide protection from the weather but is not an electrical enclosure.

Skeleton Tubing. Neon tubing that is itself the sign or outline lighting and is not attached to an enclosure or sign body.

604.2 Definition.

Manufactured Wiring System. A system containing component parts that are assembled in the process of manufacture and cannot be inspected at the building site without damage or destruction to the assembly and used for the connection of luminaires, utilization equipment, continuous plug-in type busways, and other devices.

610.2 Definition.

Festoon Cable. Single- and multiple-conductor cable intended for use and installation in accordance with Article 610 where flexibility is required. .

Informational Note: Festoon cable consists of one or more insulated conductors cabled together with an overall jacket. It is rated 60°C (140°F), 75°C (167°F), 90°C (194°F), or 105°C (221°F) and 600 V.

620.2 Definitions.

Control Room (for Elevator, Dumbwaiter). An enclosed control space outside the hoistway, intended for full bodily entry, that contains the elevator motor controller. The room could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter but not the electric driving machine or the hydraulic machine.

Control Space (for Elevator, Dumbwaiter). A space inside or outside the hoistway, intended to be accessed with or without full bodily entry, that contains the elevator motor controller. This space could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter but not the electrical driving machine or the hydraulic machine.

Control System. The overall system governing the starting, stopping, direction of motion, acceleration, speed, and retardation of the moving member.

Controller, Motion. The electrical device(s) for that part of the control system that governs the acceleration, speed, retardation, and stopping of the moving member.

Controller, Motor. The operative units of the control system comprised of the starter device(s) and power conversion equipment used to drive an electric motor, or the pumping unit used to power hydraulic control equipment.

Controller, Operation. The electrical device(s) for that part of the control system that initiates the starting, stopping, and direction of motion in response to a signal from an operating device.

Machine Room (for Elevator, Dumbwaiter). An enclosed machinery space outside the hoistway, intended for full bodily entry, that contains the electrical driving machine or the hydraulic machine. The room could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter.

Machinery Space (for Elevator, Dumbwaiter). A space inside or outside the hoistway, intended to be accessed with or without full bodily entry, that contains elevator or dumbwaiter mechanical equipment, and could also contain electrical equipment used directly in connection with the elevator or dumbwaiter. This space could also contain the electrical driving machine or the hydraulic machine.

Operating Device. The car switch, pushbuttons, key or toggle switch(s), or other devices used to activate the operation controller.

Remote Machine Room and Control Room (for Elevator, Dumbwaiter). A machine room or control room that is not attached to the outside perimeter or surface of the walls, ceiling, or floor of the hoistway.

Remote Machinery Space and Control Space (for Elevator, Dumbwaiter). A machinery space or control space that is not within the hoistway, machine room, or control room and that is not attached to the outside perimeter or surface of the walls, ceiling, or floor of the hoistway.

Signal Equipment. Includes audible and visual equipment such as chimes, gongs, lights, and displays that convey information to the user.

34. An enclosed machinery space outside the hoistway, intended for full bodily entry, that contains the electrical driving machine or the hydraulic machine. The room could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter defines:

- a. Machine Room (for Elevator, Dumbwaiter)
- b. Machinery Space (for Elevator, Dumbwaiter)
- c. Remote Machine Room and Control Room (for Elevator, Dumbwaiter)
- d. Remote Machinery Space and Control Space (for Elevator, Dumbwaiter)

35. A space inside or outside the hoistway, intended to be accessed with or without full bodily entry, that contains elevator or dumbwaiter mechanical equipment, and could also contain electrical equipment used directly in connection with the elevator or dumbwaiter. This space could also contain the electrical driving machine or the hydraulic machine defines:

- a. Machine Room (for Elevator, Dumbwaiter)
- b. Machinery Space (for Elevator, Dumbwaiter)
- c. Remote Machine Room and Control Room (for Elevator, Dumbwaiter)
- d. Remote Machinery Space and Control Space (for Elevator, Dumbwaiter)

36. A machine room or control room that is not attached to the outside perimeter or surface of the walls, ceiling, or floor of the hoistway defines:

- a. Machine Room (for Elevator, Dumbwaiter)
 - b. Machinery Space (for Elevator, Dumbwaiter)
 - c. Remote Machine Room and Control Room (for Elevator, Dumbwaiter)
 - d. Remote Machinery Space and Control Space (for Elevator, Dumbwaiter)
37. A machinery space or control space that is not within the hoistway, machine room, or control room and that is not attached to the outside perimeter or surface of the walls, ceiling, or floor of the hoistway defines:
- a. Machine Room (for Elevator, Dumbwaiter)
 - b. Machinery Space (for Elevator, Dumbwaiter)
 - c. Remote Machine Room and Control Room (for Elevator, Dumbwaiter)
 - d. Remote Machinery Space and Control Space (for Elevator, Dumbwaiter)
38. The operative units of the control system comprised of the starter device(s) and power conversion equipment used to drive an electric motor, or the pumping unit used to power hydraulic control equipment defines:
- a. Operating Device
 - b. Signal Equipment
 - c. Controller, Operation
 - d. Controller, Motor
39. The electrical device(s) for that part of the control system that initiates the starting, stopping, and direction of motion in response to a signal from an operating device defines:
- a. Operating Device
 - b. Signal Equipment
 - c. Controller, Operation
 - d. Controller, Motor
40. Includes audible and visual equipment such as chimes, gongs, lights, and displays that convey information to the user defines:
- a. Operating Device
 - b. Signal Equipment
 - c. Controller, Operation
 - d. Controller, Motor
41. The car switch, pushbuttons, key or toggle switch(s), or other devices used to activate the operation controller defines:
- a. Operating Device
 - b. Signal Equipment
 - c. Controller, Operation
 - d. Controller, Motor
42. An enclosed control space outside the hoistway, intended for full bodily entry, that contains the elevator motor controller. The room could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter but not the electric driving machine or the hydraulic machine defines:
- a. Control Room (for Elevator, Dumbwaiter)
 - b. Control Space (for Elevator, Dumbwaiter)
 - c. Control System
 - d. Controller, Motion
43. A space inside or outside the hoistway, intended to be accessed with or without full bodily entry, that contains the elevator motor controller. This space could also contain electrical and/or mechanical equipment used directly in connection with the elevator or dumbwaiter but not the electrical driving machine or the hydraulic machine defines:
- a. Control Room (for Elevator, Dumbwaiter)
 - b. Control Space (for Elevator, Dumbwaiter)
 - c. Control System
 - d. Controller, Motion
44. The overall system governing the starting, stopping, direction of motion, acceleration, speed, and retardation of the moving member defines:
- a. Control Room (for Elevator, Dumbwaiter)

- b. Control Space (for Elevator, Dumbwaiter)
 - c. Control System
 - d. Controller, Motion
45. The electrical device(s) for that part of the control system that governs the acceleration, speed, retardation, and stopping of the moving member defines:
- a. Control Room (for Elevator, Dumbwaiter)
 - b. Control Space (for Elevator, Dumbwaiter)
 - c. Control System
 - d. Controller, Motion
46. Electrical Datum Plane. The electrical datum plane is defined as follows:
- a. In land areas subject to tidal fluctuation, the electrical datum plane is a horizontal plane 606 mm (2 ft.) above the highest tide level for the area occurring under normal circumstances, that is, highest high tide.
 - b. In land areas not subject to tidal fluctuation, the electrical datum plane is a horizontal plane 606 mm (2 ft.) above the highest water level for the area occurring under normal circumstances.
 - c. The electrical datum plane for floating piers and landing stages that are (a) installed to permit rise and fall response to water level, without lateral movement, and (b) that are so equipped that they can rise to the datum plane established for (1) or (2), is a horizontal plane 762 mm (30 in.) above the water level at the floating pier or landing stage and a minimum of 305 mm (12 in.) above the level of the deck.
 - d. all of the above
47. Systems of illumination utilizing fluorescent lamps, high-intensity discharge (HID) lamps, or neon tubing defines:
- a. Section Sign
 - b. Neon Tubing
 - c. LED Sign Illumination System
 - d. Electric-Discharge Lighting
48. A complete lighting system for use in signs and outline lighting consisting of light emitting diode (LED) light sources, power supplies, wire, and connectors to complete the installation defines:
- a. Section Sign
 - b. Neon Tubing
 - c. LED Sign Illumination System
 - d. Electric-Discharge Lighting
49. Electric-discharge luminous tubing that is manufactured into shapes to illuminate signs, form letters, parts of letters, skeleton tubing, outline lighting, other decorative elements, or art forms and filled with various inert gases defines:
- a. Section Sign
 - b. Neon Tubing
 - c. LED Sign Illumination System
 - d. Electric-Discharge Lighting
50. A sign or outline lighting system, shipped as subassemblies, that requires field-installed wiring between the subassemblies to complete the overall sign. The subassemblies are either physically joined to form a single sign unit or are installed as separate remote parts of an overall sign defines:
- a. Section Sign
 - b. Neon Tubing
 - c. LED Sign Illumination System
 - d. Electric-Discharge Lighting
51. A portion of a sign that may provide protection from the weather but is not an electrical enclosure defines:
- a. Sign Body
 - b. Skeleton Tubing
 - c. Manufactured Wiring System
 - d. Festoon Cable
52. Neon tubing that is itself the sign or outline lighting and is not attached to an enclosure or sign body defines:
- a. Sign Body
 - b. Skeleton Tubing

- c. Manufactured Wiring System
- d. Festoon Cable

53. A system containing component parts that are assembled in the process of manufacture and cannot be inspected at the building site without damage or destruction to the assembly and used for the connection of luminaires, utilization equipment, continuous plug-in type busways, and other devices defines:

- a. Sign Body
- b. Skeleton Tubing
- c. Manufactured Wiring System
- d. Festoon Cable

54. Single- and multiple-conductor cable intended for use and installation in accordance with Article 610 where flexibility is required defines:

- a. Sign Body
- b. Skeleton Tubing
- c. Manufactured Wiring System
- d. Festoon Cable

625.2 Definitions.

Electric Vehicle. An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For the purpose of this article, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

Electric Vehicle Connector. A device that, by insertion into an electric vehicle inlet, establishes an electrical connection to the electric vehicle for the purpose of power transfer and information exchange. This device is part of the electric vehicle coupler.

Electric Vehicle Coupler. A mating electric vehicle inlet and electric vehicle connector set.

Electric Vehicle Inlet. The device on the electric vehicle into which the electric vehicle connector is inserted for power transfer and information exchange. This device is part of the electric vehicle coupler. For the purposes of this *Code*, the electric vehicle inlet is considered to be part of the electric vehicle and not part of the electric vehicle supply equipment.

Electric Vehicle Nonvented Storage Battery. A hermetically sealed battery, comprised of one or more rechargeable electrochemical cells, that has no provision for the release of excessive gas pressure, or for the addition of water or electrolyte, or for external measurements of electrolyte specific gravity.

Electric Vehicle Supply Equipment. The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

Personnel Protection System. A system of personnel protection devices and constructional features that when used together provide protection against electric shock of personnel.

Plug-In Hybrid Electric Vehicle (PHEV). A type of electric vehicle intended for on-road use with the ability to store and use off-vehicle electrical energy in the rechargeable energy storage system, and having a second source of motive power.

Rechargeable Energy Storage System. Any power source that has the capability to be charged and discharged.

626.2 Definitions.

Cable Management System. (Electrified Truck Parking Spaces). An apparatus designed to control and organize unused lengths of cable or cord at electrified truck parking spaces.

Cord Connector. A device that, by inserting it into a truck flanged surface inlet, establishes an electrical connection to the truck for the purpose of providing power for the on-board electric loads and may provide a means for information exchange. This device is part of the truck coupler.

Disconnecting Means, Parking Space. The necessary equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors in an electrified truck parking space and intended to constitute the means of cutoff for the supply to that truck.

Electrified Truck Parking Space. A truck parking space that has been provided with an electrical system that allows truck operators to connect their vehicles while stopped and to use off-board power sources in order to operate on-board systems such as air conditioning, heating, and appliances, without any engine idling.

Electrified Truck Parking Space Wiring Systems. All of the electrical wiring, equipment, and appurtenances related to electrical installations within an electrified truck parking space, including the electrified parking space supply equipment.

Overhead Gantry. A structure consisting of horizontal framework, supported by vertical columns spanning above electrified truck parking spaces, that supports equipment, appliances, raceway, and other necessary components for the purpose of supplying electrical, HVAC, internet, communications, and other services to the spaces.

Separable Power Supply Cable Assembly. A flexible cord or cable, including ungrounded, grounded, and equipment grounding conductors, provided with a cord connector, an attachment plug, and all other fittings, grommets, or devices installed for the purpose of delivering energy from the source of electrical supply to the truck or TRU flanged surface inlet.

Transport Refrigerated Unit (TRU). A trailer or container, with integrated cooling or heating, or both, used for the purpose of maintaining the desired environment of temperature-sensitive goods or products.

Truck. A motor vehicle designed for the transportation of goods, services, and equipment.

Truck Coupler. A truck flanged surface inlet and mating cord connector.

Truck Flanged Surface Inlet. The device(s) on the truck into which the connector(s) is inserted to provide electric energy and other services. This device is part of the truck coupler. For the purposes of this article, the truck flanged surface inlet is considered to be part of the truck and not part of the electrified truck parking space supply equipment.

55. A truck parking space that has been provided with an electrical system that allows truck operators to connect their vehicles while stopped and to use off-board power sources in order to operate on-board systems such as air conditioning, heating, and appliances, without any engine idling defines:

- a. Electrified Truck Parking Space
- b. Electrified Truck Parking Space Wiring Systems
- c. Overhead Gantry
- d. Separable Power Supply Cable Assembly

56. All of the electrical wiring, equipment, and appurtenances related to electrical installations within an electrified truck parking space, including the electrified parking space supply equipment defines:

- a. Electrified Truck Parking Space
- b. Electrified Truck Parking Space Wiring Systems
- c. Overhead Gantry
- d. Separable Power Supply Cable Assembly

57. A structure consisting of horizontal framework, supported by vertical columns spanning above electrified truck parking spaces, that supports equipment, appliances, raceway, and other necessary components for the purpose of supplying electrical, HVAC, internet, communications, and other services to the spaces defines:

- a. Electrified Truck Parking Space
- b. Electrified Truck Parking Space Wiring Systems
- c. Overhead Gantry
- d. Separable Power Supply Cable Assembly

58. A flexible cord or cable, including ungrounded, grounded, and equipment grounding conductors, provided with a cord connector, an attachment plug, and all other fittings, grommets, or devices installed for the purpose of delivering energy from the source of electrical supply to the truck or TRU flanged surface inlet defines:

- a. Electrified Truck Parking Space
- b. Electrified Truck Parking Space Wiring Systems
- c. Overhead Gantry
- d. Separable Power Supply Cable Assembly

59. The necessary equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors in an electrified truck parking space and intended to constitute the means of cutoff for the supply to that truck defines:

- a. Disconnecting Means, Parking Space

- b. Plug-In Hybrid Electric Vehicle (PHEV)
 - c. Cable Management System. (Electrified Truck Parking Spaces)
 - d. Cord Connector
60. A type of electric vehicle intended for on-road use with the ability to store and use off-vehicle electrical energy in the rechargeable energy storage system, and having a second source of motive power defines:
- a. Disconnecting Means, Parking Space
 - b. Plug-In Hybrid Electric Vehicle (PHEV)
 - c. Cable Management System. (Electrified Truck Parking Spaces)
 - d. Cord Connector
61. An apparatus designed to control and organize unused lengths of cable or cord at electrified truck parking spaces defines:
- a. Disconnecting Means, Parking Space
 - b. Plug-In Hybrid Electric Vehicle (PHEV)
 - c. Cable Management System. (Electrified Truck Parking Spaces)
 - d. Cord Connector
62. A device that, by inserting it into a truck flanged surface inlet, establishes an electrical connection to the truck for the purpose of providing power for the on-board electric loads and may provide a means for information exchange. This device is part of the truck coupler defines:
- a. Disconnecting Means, Parking Space
 - b. Plug-In Hybrid Electric Vehicle (PHEV)
 - c. Cable Management System. (Electrified Truck Parking Spaces)
 - d. Cord Connector
63. A trailer or container, with integrated cooling or heating, or both, used for the purpose of maintaining the desired environment of temperature-sensitive goods or products defines:
- a. Truck Flanged Surface Inlet
 - b. Truck Coupler
 - c. Truck
 - d. Transport Refrigerated Unit (TRU)
64. A motor vehicle designed for the transportation of goods, services, and equipment defines:
- a. Truck Flanged Surface Inlet
 - b. Truck Coupler
 - c. Truck
 - d. Transport Refrigerated Unit (TRU)
65. A truck flanged surface inlet and mating cord connector defines:
- a. Truck Flanged Surface Inlet
 - b. Truck Coupler
 - c. Truck
 - d. Transport Refrigerated Unit (TRU)
66. The device(s) on the truck into which the connector(s) is inserted to provide electric energy and other services. This device is part of the truck coupler. For the purposes of this article, the truck flanged surface inlet is considered to be part of the truck and not part of the electrified truck parking space supply equipment defines:
- a. Truck Flanged Surface Inlet
 - b. Truck Coupler
 - c. Truck
 - d. Transport Refrigerated Unit (TRU)
67. Any power source that has the capability to be charged and discharged defines:
- a. Rechargeable Energy Storage System
 - b. Electric Vehicle
 - c. Electric Vehicle Supply Equipment
 - d. Personnel Protection System
68. An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric

current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For the purpose of this article, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included defines:

- a. Rechargeable Energy Storage System
- b. Electric Vehicle
- c. Electric Vehicle Supply Equipment
- d. Personnel Protection System

69. The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle defines:

- a. Rechargeable Energy Storage System
- b. Electric Vehicle
- c. Electric Vehicle Supply Equipment
- d. Personnel Protection System

70. A system of personnel protection devices and constructional features that when used together provide protection against electric shock of personnel defines:

- a. Rechargeable Energy Storage System
- b. Electric Vehicle
- c. Electric Vehicle Supply Equipment
- d. Personnel Protection System

71. A device that, by insertion into an electric vehicle inlet, establishes an electrical connection to the electric vehicle for the purpose of power transfer and information exchange. This device is part of the electric vehicle coupler defines:

- a. Electric Vehicle
- b. Electric Vehicle Inlet
- c. Electric Vehicle Coupler
- d. Electric Vehicle Connector

72. A mating electric vehicle inlet and electric vehicle connector set defines:

- a. Electric Vehicle
- b. Electric Vehicle Inlet
- c. Electric Vehicle Coupler
- d. Electric Vehicle Connector

73. The device on the electric vehicle into which the electric vehicle connector is inserted for power transfer and information exchange. This device is part of the electric vehicle coupler. For the purposes of this *Code*, the electric vehicle inlet is considered to be part of the electric vehicle and not part of the electric vehicle supply equipment defines:

- a. Electric Vehicle
- b. Electric Vehicle Inlet
- c. Electric Vehicle Coupler
- d. Electric Vehicle Connector

74. Nonvented Storage Battery. A hermetically sealed battery, comprised of one or more rechargeable electrochemical cells, that has no provision for the release of excessive gas pressure, or for the addition of water or electrolyte, or for external measurements of electrolyte specific gravity defines:

- a. Electric Vehicle
- b. Electric Vehicle Inlet
- c. Electric Vehicle Coupler
- d. Electric Vehicle Connector

640.2 Definitions. For purposes of this article, the following definitions apply.

Abandoned Audio Distribution Cable. Installed audio distribution cable that is not terminated at equipment and not identified for future use with a tag.

Audio Amplifier or Pre-Amplifier. Electronic equipment that increases the current or voltage, or both, potential of an audio signal intended for use by another piece of audio equipment. *Amplifier* is the term used to denote an audio amplifier within this article.

Audio Autotransformer. A transformer with a single winding and multiple taps intended for use with an amplifier loudspeaker signal output.

Audio Signal Processing Equipment. Electrically operated equipment that produces, processes, or both, electronic signals that, when appropriately amplified and reproduced by a loudspeaker, produce an acoustic signal within the range of normal human hearing (typically 20–20 kHz). Within this article, the terms *equipment* and *audio equipment* are assumed to be equivalent to audio signal processing equipment.

Audio System. Within this article, the totality of all equipment and interconnecting wiring used to fabricate a fully functional audio signal processing, amplification, and reproduction system.

Audio Transformer. A transformer with two or more electrically isolated windings and multiple taps intended for use with an amplifier loudspeaker signal output.

Equipment Rack. A framework for the support, enclosure, or both, of equipment; may be portable or stationary. See ANSI/EIA/310-D-1992, *Cabinets, Racks, Panels and Associated Equipment*.

Loudspeaker. Equipment that converts an ac electric signal into an acoustic signal. The term *speaker* is commonly used to mean *loudspeaker*.

Maximum Output Power. The maximum output power delivered by an amplifier into its rated load as determined under specified test conditions. This may exceed the manufacturer's rated output power for the same amplifier.

Mixer. Equipment used to combine and level match a multiplicity of electronic signals, such as from microphones, electronic instruments, and recorded audio.

Mixer–Amplifier. Equipment that combines the functions of a mixer and amplifier within a single enclosure.

Portable Equipment. Equipment fed with portable cords or cables intended to be moved from one place to another.

Powered Loudspeaker. Equipment that consists of a loudspeaker and amplifier within the same enclosure. Other signal processing may also be included.

Rated Load Impedance. The amplifier manufacturer's stated or marked speaker impedance into which an amplifier will deliver its rated output power; 2 Ω , 4 Ω , and 8 Ω are typical ratings.

Rated Output Power. The amplifier manufacturer's stated or marked output power capability into its rated load.

Rated Output Voltage. For audio amplifiers of the constant voltage type, the nominal output voltage when the amplifier is delivering full rated power. Rated output voltage is used for determining approximate acoustic output in distributed speaker systems that typically employ impedance matching transformers. Typical ratings are 25 volts, 70.7 volts, and 100 volts.

Technical Power System. An electrical distribution system with grounding in accordance with 250.146(D), where the equipment grounding conductor is isolated from the premises grounded conductor except at a single grounded termination point within a branch-circuit panelboard, at the originating (main breaker) branch-circuit panelboard, or at the premises grounding electrode.

Temporary Equipment. Portable wiring and equipment intended for use with events of a transient or temporary nature where all equipment is presumed to be removed at the conclusion of the event.

645.2 Definitions.

Abandoned Supply Circuits and Interconnecting Cables.

Installed supply circuits and interconnecting cables that are not terminated at equipment and not identified for future use with a tag.

Critical Operations Data System. An information technology equipment system that requires continuous operation for reasons of public safety, emergency management, national security, or business continuity.

Information Technology Equipment (ITE). Equipment and systems rated 600 volts or less, normally found in offices or other business establishments and similar environments classified as ordinary locations, that are used for creation and manipulation of data, voice, video, and similar signals that are not communications equipment as defined in Part I of Article 100 and do not process communications circuits as defined in 800.2.

Information Technology Equipment Room. A room within the information technology equipment area that contains the information technology equipment.

Remote Disconnect Control. An electric device and circuit that controls a disconnecting means through a relay or equivalent device.

Zone. A physically identifiable area (such as barriers or separation by distance) within an information technology equipment room, with dedicated power and cooling systems for the information technology equipment or systems.

75. An electrical distribution system with grounding in accordance with 250.146(D), where the equipment grounding conductor is isolated from the premises grounded conductor except at a single grounded termination point within a branch-circuit panelboard, at the originating (main breaker) branch-circuit panelboard, or at the premises grounding electrode defines:
- Critical Operations Data System.
 - Abandoned Supply Circuits and Interconnecting Cables
 - Temporary Equipment
 - Technical Power System
76. Portable wiring and equipment intended for use with events of a transient or temporary nature where all equipment is presumed to be removed at the conclusion of the event defines:
- Critical Operations Data System.
 - Abandoned Supply Circuits and Interconnecting Cables
 - Temporary Equipment
 - Technical Power System
77. Installed supply circuits and interconnecting cables that are not terminated at equipment and not identified for future use with a tag defines:
- Critical Operations Data System.
 - Abandoned Supply Circuits and Interconnecting Cables
 - Temporary Equipment
 - Technical Power System
78. An information technology equipment system that requires continuous operation for reasons of public safety, emergency management, national security, or business continuity defines:
- Critical Operations Data System.
 - Abandoned Supply Circuits and Interconnecting Cables
 - Temporary Equipment
 - Technical Power System
79. Equipment and systems rated 600 volts or less, normally found in offices or other business establishments and similar environments classified as ordinary locations, that are used for creation and manipulation of data, voice, video, and similar signals that are not communications equipment as defined in Part I of Article 100 and do not process communications circuits as defined in 800.2 defines:
- Information Technology Equipment (ITE)
 - Information Technology Equipment Room
 - Remote Disconnect Control
 - Zone
80. A room within the information technology equipment area that contains the information technology equipment defines:
- Information Technology Equipment (ITE)
 - Information Technology Equipment Room
 - Remote Disconnect Control
 - Zone
81. An electric device and circuit that controls a disconnecting means through a relay or equivalent device defines:
- Information Technology Equipment (ITE)
 - Information Technology Equipment Room
 - Remote Disconnect Control
 - Zone
82. A physically identifiable area (such as barriers or separation by distance) within an information technology equipment room, with dedicated power and cooling systems for the information technology equipment or systems defines:
- Information Technology Equipment (ITE)

- b. Information Technology Equipment Room
 - c. Remote Disconnect Control
 - d. Zone
83. Installed audio distribution cable that is not terminated at equipment and not identified for future use with a tag defines:
- a. Abandoned Audio Distribution Cable
 - b. Audio Amplifier or Pre-Amplifier
 - c. Audio Autotransformer
 - d. Audio Signal Processing Equipment
84. Electronic equipment that increases the current or voltage, or both, potential of an audio signal intended for use by another piece of audio equipment. *Amplifier* is the term used to denote an audio amplifier within this article defines:
- a. Abandoned Audio Distribution Cable
 - b. Audio Amplifier or Pre-Amplifier
 - c. Audio Autotransformer
 - d. Audio Signal Processing Equipment
85. A transformer with a single winding and multiple taps intended for use with an amplifier loudspeaker signal output defines:
- a. Abandoned Audio Distribution Cable
 - b. Audio Amplifier or Pre-Amplifier
 - c. Audio Autotransformer
 - d. Audio Signal Processing Equipment
86. Electrically operated equipment that produces, processes, or both, electronic signals that, when appropriately amplified and reproduced by a loudspeaker, produce an acoustic signal within the range of normal human hearing (typically 20–20 kHz). Within this article, the terms *equipment* and *audio equipment* are assumed to be equivalent to audio signal processing equipment defines:
- a. Abandoned Audio Distribution Cable
 - b. Audio Amplifier or Pre-Amplifier
 - c. Audio Autotransformer
 - d. Audio Signal Processing Equipment
87. Within this article, the totality of all equipment and interconnecting wiring used to fabricate a fully functional audio signal processing, amplification, and reproduction system defines:
- a. Loudspeaker
 - b. Equipment Rack
 - c. Audio Transformer
 - d. Audio System
88. A transformer with two or more electrically isolated windings and multiple taps intended for use with an amplifier loudspeaker signal output defines:
- a. Loudspeaker
 - b. Equipment Rack
 - c. Audio Transformer
 - d. Audio System
89. A framework for the support, enclosure, or both, of equipment; may be portable or stationary defines:
- a. Loudspeaker
 - b. Equipment Rack
 - c. Audio Transformer
 - d. Audio System
90. Equipment that converts an ac electric signal into an acoustic signal defines:
- a. Loudspeaker
 - b. Equipment Rack
 - c. Audio Transformer
 - d. Audio System
91. The maximum output power delivered by an amplifier into its rated load as determined under specified test conditions. This may exceed the manufacturer's rated output power for the same amplifier defines:

- a. Maximum Output Power
 - b. Mixer
 - c. Mixer–Amplifier
 - d. Portable Equipment
92. Equipment used to combine and level match a multiplicity of electronic signals, such as from microphones, electronic instruments, and recorded audio defines:
- a. Maximum Output Power
 - b. Mixer
 - c. Mixer–Amplifier
 - d. Portable Equipment
93. Equipment that combines the functions of a mixer and amplifier within a single enclosure defines:
- a. Maximum Output Power
 - b. Mixer
 - c. Mixer–Amplifier
 - d. Portable Equipment
94. Equipment fed with portable cords or cables intended to be moved from one place to another defines:
- a. Maximum Output Power
 - b. Mixer
 - c. Mixer–Amplifier
 - d. Portable Equipment
95. Equipment that consists of a loudspeaker and amplifier within the same enclosure. Other signal processing may also be included defines:
- a. Powered Loudspeaker
 - b. Rated Load Impedance
 - c. Rated Output Power
 - d. Rated Output Voltage
96. The amplifier manufacturer’s stated or marked speaker impedance into which an amplifier will deliver its rated output power; 2Ω, 4Ω, and 8Ω are typical ratings defines:
- a. Powered Loudspeaker
 - b. Rated Load Impedance
 - c. Rated Output Power
 - d. Rated Output Voltage
97. The amplifier manufacturer’s stated or marked output power capability into its rated load defines:
- a. Powered Loudspeaker
 - b. Rated Load Impedance
 - c. Rated Output Power
 - d. Rated Output Voltage
98. For audio amplifiers of the constant voltage type, the nominal output voltage when the amplifier is delivering full rated power. Rated output voltage is used for determining approximate acoustic output in distributed speaker systems that typically employ impedance matching transformers. Typical ratings are 25 volts, 70.7 volts, and 100 volts defines:
- a. Powered Loudspeaker
 - b. Rated Load Impedance
 - c. Rated Output Power
 - d. Rated Output Voltage

646.2 Definitions. The definitions in 645.2 shall apply. For the purposes of this article, the following additional definition applies.

Modular Data Center (MDC). Prefabricated units, rated 600 volts or less, consisting of an outer enclosure housing multiple racks or cabinets of information technology equipment (ITE) (e.g., servers) and various support equipment, such as electrical service and distribution equipment, HVAC systems, and the like.

660.2 Definitions.

Long-Time Rating. A rating based on an operating interval of 5 minutes or longer.

Mobile. X-ray equipment mounted on a permanent base with wheels and/or casters for moving while completely assembled.

Momentary Rating. A rating based on an operating interval that does not exceed 5 seconds.

Portable. X-ray equipment designed to be hand-carried.

Transportable. X-ray equipment that is to be installed in a vehicle or that may be readily disassembled for transport in a vehicle.

665.2 Definitions.

Applicator. The device used to transfer energy between the output circuit and the object or mass to be heated
Converting Device. That part of the heating equipment that converts input mechanical or electrical energy to the voltage, current, and frequency used for the heating applicator. A converting device consists of equipment using line frequency, all static multipliers, oscillator-type units using vacuum tubes, inverters using solid-state devices, or motor generator equipment.

Dielectric Heating. Heating of a nominally insulating material due to its own dielectric losses when the material is placed in a varying electric field.

Heating Equipment. As used in this article, any equipment that is used for heating purposes and whose heat is generated by induction or dielectric methods.

Induction Heating, Melting, and Welding. The heating, melting, or welding of a nominally conductive material due to its own I²R losses when the material is placed in a varying electromagnetic field.

668.2 Definitions.

Cell Line. An assembly of electrically interconnected electrolytic cells supplied by a source of direct-current power.

Cell Line Attachments and Auxiliary Equipment. As applied to this article, a term that includes, but is not limited to, auxiliary tanks; process piping; ductwork; structural supports; exposed cell line conductors; conduits and other raceways; pumps, positioning equipment, and cell cutout or bypass electrical devices. Auxiliary equipment includes tools, welding machines, crucibles, and other portable equipment used for operation and maintenance within the electrolytic cell line working zone. In the cell line working zone, auxiliary equipment includes the exposed conductive surfaces of ungrounded cranes and crane-mounted cell-servicing equipment.

Electrically Connected. A connection capable of carrying current as distinguished from connection through electromagnetic induction.

Electrolytic Cell. A tank or vat in which electrochemical reactions are caused by applying electric energy for the purpose of refining or producing usable materials.

Electrolytic Cell Line Working Zone. The space envelope wherein operation or maintenance is normally performed on or in the vicinity of exposed energized surfaces of electrolytic cell lines or their attachments.

670.2 Definition.

Industrial Machinery (Machine). A power-driven machine (or a group of machines working together in a coordinated manner), not portable by hand while working, that is used to process material by cutting; forming; pressure; electrical, thermal, or optical techniques; lamination; or a combination of these processes. It can include associated equipment used to transfer material or tooling, including fixtures, to assemble/disassemble, to inspect or test, or to package. [The associated electrical equipment, including the logic controller(s) and associated software or logic together with the machine actuators and sensors, are considered as part of the industrial machine.]

675.2 Definitions.

Center Pivot Irrigation Machine. A multimotored irrigation machine that revolves around a central pivot and employs alignment switches or similar devices to control individual motors.

Collector Rings. An assembly of slip rings for transferring electric energy from a stationary to a rotating member.

Irrigation Machine. An electrically driven or controlled machine, with one or more motors, not hand-portable, and used primarily to transport and distribute water for agricultural purposes.

99. An assembly of electrically interconnected electrolytic cells supplied by a source of direct-current power defines:

- a. Electrolytic Cell Line Working Zone
- b. Electrolytic Cell

- c. Electrically Connected
- d. Cell Line Attachments and Auxiliary Equipment
- e. Cell Line

100. As applied to this article, a term that includes, but is not limited to, auxiliary tanks; process piping; ductwork; structural supports; exposed cell line conductors; conduits and other raceways; pumps, positioning equipment, and cell cutout or bypass electrical devices. Auxiliary equipment includes tools, welding machines, crucibles, and other portable equipment used for operation and maintenance within the electrolytic cell line working zone. In the cell line working zone, auxiliary equipment includes the exposed conductive surfaces of ungrounded cranes and crane-mounted cell-servicing equipment defines:

- a. Electrolytic Cell Line Working Zone
- b. Electrolytic Cell
- c. Electrically Connected
- d. Cell Line Attachments and Auxiliary Equipment
- e. Cell Line

101. A connection capable of carrying current as distinguished from connection through electromagnetic induction defines:

- a. Electrolytic Cell Line Working Zone
- b. Electrolytic Cell
- c. Electrically Connected
- d. Cell Line Attachments and Auxiliary Equipment
- e. Cell Line

102. A tank or vat in which electrochemical reactions are caused by applying electric energy for the purpose of refining or producing usable materials defines:

- a. Electrolytic Cell Line Working Zone
- b. Electrolytic Cell
- c. Electrically Connected
- d. Cell Line Attachments and Auxiliary Equipment
- e. Cell Line

103.. The space envelope wherein operation or maintenance is normally performed on or in the vicinity of exposed energized surfaces of electrolytic cell lines or their attachments defines:

- a. Electrolytic Cell Line Working Zone
- b. Electrolytic Cell
- c. Electrically Connected
- d. Cell Line Attachments and Auxiliary Equipment
- e. Cell Line

104. A power-driven machine (or a group of machines working together in a coordinated manner), not portable by hand while working, that is used to process material by cutting; forming; pressure; electrical, thermal, or optical techniques; lamination; or a combination of these processes. It can include associated equipment used to transfer material or tooling, including fixtures, to assemble/disassemble, to inspect or test, or to package defines:

- a. Industrial Machinery (Machine)
- b. Center Pivot Irrigation Machine
- c. Collector Rings
- d. Irrigation Machine
- e. Modular Data Center (MDC)

105. A multimotored irrigation machine that revolves around a central pivot and employs alignment switches or similar devices to control individual motors defines:

- a. Industrial Machinery (Machine)
- b. Center Pivot Irrigation Machine
- c. Collector Rings
- d. Irrigation Machine
- e. Modular Data Center (MDC)

106. An assembly of slip rings for transferring electric energy from a stationary to a rotating member defines:

- a. Industrial Machinery (Machine)
- b. Center Pivot Irrigation Machine

- c. Collector Rings
- d. Irrigation Machine
- e. Modular Data Center (MDC)

107. An electrically driven or controlled machine, with one or more motors, not hand-portable, and used primarily to transport and distribute water for agricultural purposes defines:

- a. Industrial Machinery (Machine)
- b. Center Pivot Irrigation Machine
- c. Collector Rings
- d. Irrigation Machine
- e. Modular Data Center (MDC)

108. Prefabricated units, rated 600 volts or less, consisting of an outer enclosure housing multiple racks or cabinets of information technology equipment (ITE) (e.g., servers) and various support equipment, such as electrical service and distribution equipment, HVAC systems, and the like defines:

- a. Industrial Machinery (Machine)
- b. Center Pivot Irrigation Machine
- c. Collector Rings
- d. Irrigation Machine
- e. Modular Data Center (MDC)

109. A rating based on an operating interval of 5 minutes or longer defines:

- a. Transportable
- b. Portable
- c. Momentary Rating
- d. Mobile
- e. Long-Time Rating

110. X-ray equipment mounted on a permanent base with wheels and/or casters for moving while completely assembled defines:

- a. Transportable
- b. Portable
- c. Momentary Rating
- d. Mobile
- e. Long-Time Rating

111. A rating based on an operating interval that does not exceed 5 seconds defines:

- a. Transportable
- b. Portable
- c. Momentary Rating
- d. Mobile
- e. Long-Time Rating

112. X-ray equipment designed to be hand-carried defines:

- a. Transportable
- b. Portable
- c. Momentary Rating
- d. Mobile
- e. Long-Time Rating

113. X-ray equipment that is to be installed in a vehicle or that may be readily disassembled for transport in a vehicle defines:

- a. Transportable
- b. Portable
- c. Momentary Rating
- d. Mobile
- e. Long-Time Rating

114. The device used to transfer energy between the output circuit and the object or mass to be heated
Converting Device. That part of the heating equipment that converts input mechanical or electrical energy to the voltage, current, and frequency used for the heating applicator. A converting device consists of equipment using

line frequency, all static multipliers, oscillator-type units using vacuum tubes, inverters using solid-state devices, or motor generator equipment defines:

- a. Applicator
- b. Dielectric Heating
- c. Heating Equipment
- d. Induction Heating, Melting, and Welding

115. Heating of a nominally insulating material due to its own dielectric losses when the material is placed in a varying electric field defines:

- a. Applicator
- b. Dielectric Heating
- c. Heating Equipment
- d. Induction Heating, Melting, and Welding

116. As used in this article, any equipment that is used for heating purposes and whose heat is generated by induction or dielectric methods defines:

- a. Applicator
- b. Dielectric Heating
- c. Heating Equipment
- d. Induction Heating, Melting, and Welding

117. The heating, melting, or welding of a nominally conductive material due to its own I^2R losses when the material is placed in a varying electromagnetic field defines:

- a. Applicator
- b. Dielectric Heating
- c. Heating Equipment
- d. Induction Heating, Melting, and Welding

680.2 Definitions.

Cord-and-Plug-Connected Lighting Assembly. A lighting assembly consisting of a luminaire intended for installation in the wall of a spa, hot tub, or storable pool, and a cord-and-plug-connected transformer.

Dry-Niche Luminaire. A luminaire intended for installation in the floor or wall of a pool, spa, or fountain in a niche that is sealed against the entry of water.

Fixed (as applied to equipment). Equipment that is fastened or otherwise secured at a specific location.

Forming Shell. A structure designed to support a wet-niche luminaire assembly and intended for mounting in a pool or fountain structure.

Fountain. Fountains, ornamental pools, display pools, and reflection pools. The definition does not include drinking fountains.

Hydromassage Bathtub. A permanently installed bathtub equipped with a recirculating piping system, pump, and associated equipment. It is designed so it can accept, circulate, and discharge water upon each use.

Low Voltage Contact Limit. A voltage not exceeding the following values:

- (1) 15 volts (RMS) for sinusoidal ac
- (2) 21.2 volts peak for nonsinusoidal ac
- (3) 30 volts for continuous dc
- (4) 12.4 volts peak for dc that is interrupted at a rate of 10 to 200 Hz

Maximum Water Level. The highest level that water can reach before it spills out.

No-Niche Luminaire. A luminaire intended for installation above or below the water without a niche.

Packaged Spa or Hot Tub Equipment Assembly. A factory fabricated unit consisting of water-circulating, heating, and control equipment mounted on a common base, intended to operate a spa or hot tub. Equipment can include pumps, air blowers, heaters, lights, controls, sanitizer generators, and so forth.

Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly. A factory-fabricated unit consisting of water-circulating, heating, and control equipment mounted on a common base, intended to operate a therapeutic tub or hydrotherapeutic tank. Equipment can include pumps, air blowers, heaters, lights, controls, sanitizer and so forth.

Permanently Installed Decorative Fountains and Reflection Pools. Those that are constructed in the ground, on the ground, or in a building in such a manner that the fountain cannot be readily disassembled for storage,

whether or not served by electrical circuits of any nature. These units are primarily constructed for their aesthetic value and are not intended for swimming or wading.

Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools. Those that are constructed in the ground or partially in the ground, and all others capable of holding water in a depth greater than 1.0 m (42 in.), and all pools installed inside of a building, regardless of water depth, whether or not served by electrical circuits of any nature.

Pool. Manufactured or field-constructed equipment designed to contain water on a permanent or semipermanent basis and used for swimming, wading, immersion, or therapeutic purposes.

Pool Cover, Electrically Operated. Motor-driven equipment designed to cover and uncover the water surface of a pool by means of a flexible sheet or rigid frame.

Portable (as applied to equipment). Equipment that is actually moved or can easily be moved from one place to another in normal use.

Self-Contained Spa or Hot Tub. Factory-fabricated unit consisting of a spa or hot tub vessel with all water circulating, heating, and control equipment integral to the unit. Equipment can include pumps, air blowers, heaters, lights, controls, sanitizer generators, and so forth. **Self-Contained Therapeutic tubs or Hydrotherapeutic Tanks.** A factory-fabricated unit consisting of a therapeutic tub or hydrotherapeutic tank with all water-circulating, heating, and control equipment integral to the unit. Equipment may include pumps, air blowers, heaters, light controls, sanitizer generators, and so forth.

Spa or Hot Tub. A hydromassage pool, or tub for recreational or therapeutic use, not located in health care facilities designed for immersion of users, and usually having a filter, heater, and motor-driven blower. It may be installed indoors or outdoors, on the ground or supporting structure, or in the ground or supporting structure. Generally, a spa or hot tub is not designed or intended to have its contents drained or discharged after each use.

Stationary (as applied to equipment). Equipment that is not moved from one place to another in normal use. **Storable Swimming, Wading, or Immersion Pools.**

Storable/Portable Spas and Hot Tubs. Those that are constructed on or above the ground and are capable of holding water to a maximum depth of 1.0 m (42 in.), or a pool, spa, or hot tub with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension.

Through-Wall Lighting Assembly. A lighting assembly intended for installation above grade, on or through the wall of a pool, consisting of two interconnected groups of components separated by the pool wall.

Wet-Niche Luminaire. A luminaire intended for installation in a forming shell mounted in a pool or fountain structure where the luminaire will be completely surrounded by water.

118. Manufactured or field-constructed equipment designed to contain water on a permanent or semipermanent basis and used for swimming, wading, immersion, or therapeutic purposes defines:

- a. Pool
- b. Pool Cover
- c. Maximum Water Level
- d. Fixed (as applied to equipment)

119. Electrically Operated. Motor-driven equipment designed to cover and uncover the water surface of a pool by means of a flexible sheet or rigid frame defines:

- a. Pool
- b. Pool Cover
- c. Maximum Water Level
- d. Fixed (as applied to equipment)

120. The highest level that water can reach before it spills out defines:

- a. Pool
- b. Pool Cover
- c. Maximum Water Level
- d. Fixed (as applied to equipment)

121. Equipment that is fastened or otherwise secured at a specific location defines:

- a. Pool
- b. Pool Cover
- c. Maximum Water Level
- d. Fixed (as applied to equipment)

122. Equipment that is actually moved or can easily be moved from one place to another in normal use defines:
- Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly
 - Spa or Hot Tub
 - Tanks
 - Self-Contained Spa or Hot Tub
 - Portable (as applied to equipment)
123. Factory-fabricated unit consisting of a spa or hot tub vessel with all water circulating, heating, and control equipment integral to the unit. Equipment can include pumps, air blowers, heaters, lights, controls, sanitizer generators, and so forth. Self-Contained Therapeutic Tubs or Hydrotherapeutic defines:
- Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly
 - Spa or Hot Tub
 - Tanks
 - Self-Contained Spa or Hot Tub
 - Portable (as applied to equipment)
124. A factory-fabricated unit consisting of a therapeutic tub or hydrotherapeutic tank with all water-circulating, heating, and control equipment integral to the unit. Equipment may include pumps, air blowers, heaters, light controls, sanitizer generators, and so forth defines:
- Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly
 - Spa or Hot Tub
 - Tanks
 - Self-Contained Spa or Hot Tub
 - Portable (as applied to equipment)
125. A hydromassage pool, or tub for recreational or therapeutic use, not located in health care facilities designed for immersion of users, and usually having a filter, heater, and motor-driven blower. It may be installed indoors or outdoors, on the ground or supporting structure, or in the ground or supporting structure. Generally, a spa or hot tub is not designed or intended to have its contents drained or discharged after each use defines:
- Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly
 - Spa or Hot Tub
 - Tanks
 - Self-Contained Spa or Hot Tub
 - Portable (as applied to equipment)
126. A factory-fabricated unit consisting of water-circulating, heating, and control equipment mounted on a common base, intended to operate a therapeutic tub or hydrotherapeutic tank. Equipment can include pumps, air blowers, heaters, lights, controls, sanitizer and so forth defines:
- Packaged Therapeutic Tub or Hydrotherapeutic Tank Equipment Assembly
 - Spa or Hot Tub
 - Tanks
 - Self-Contained Spa or Hot Tub
 - Portable (as applied to equipment)
127. Those that are constructed in the ground, on the ground, or in a building in such a manner that the fountain cannot be readily disassembled for storage, whether or not served by electrical circuits of any nature. These units are primarily constructed for their aesthetic value and are not intended for swimming or wading defines:
- Permanently Installed Decorative Fountains and Reflection Pools
 - Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools
 - Hydromassage Bathtub
 - Stationary (as applied to equipment)
 - Storable/Portable Spas and Hot Tubs
128. Those that are constructed in the ground or partially in the ground, and all others capable of holding water in a depth greater than 1.0 m (42 in.), and all pools installed inside of a building, regardless of water depth, whether or not served by electrical circuits of any nature defines:
- Permanently Installed Decorative Fountains and Reflection Pools
 - Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools
 - Hydromassage Bathtub

- d. Stationary (as applied to equipment)
 - e. Storable/Portable Spas and Hot Tubs
129. A permanently installed bathtub equipped with a recirculating piping system, pump, and associated equipment. It is designed so it can accept, circulate, and discharge water upon each use defines:
- a. Permanently Installed Decorative Fountains and Reflection Pools
 - b. Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools
 - c. Hydromassage Bathtub
 - d. Stationary (as applied to equipment)
 - e. Storable/Portable Spas and Hot Tubs
130. Equipment that is not moved from one place to another in normal use. Storable Swimming, Wading, or Immersion Pools defines:
- a. Permanently Installed Decorative Fountains and Reflection Pools
 - b. Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools
 - c. Hydromassage Bathtub
 - d. Stationary (as applied to equipment)
 - e. Storable/Portable Spas and Hot Tubs
131. Those that are constructed on or above the ground and are capable of holding water to a maximum depth of 1.0 m (42 in.), or a pool, spa, or hot tub with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension defines:
- a. Permanently Installed Decorative Fountains and Reflection Pools
 - b. Permanently Installed Swimming, Wading, Immersion, and Therapeutic Pools
 - c. Hydromassage Bathtub
 - d. Stationary (as applied to equipment)
 - e. Storable/Portable Spas and Hot Tubs
132. A lighting assembly intended for installation above grade, on or through the wall of a pool, consisting of two interconnected groups of components separated by the pool wall defines:
- a. Through-Wall Lighting Assembly
 - b. Wet-Niche Luminaire
 - c. No-Niche Luminaire
133. A luminaire intended for installation in a forming shell mounted in a pool or fountain structure where the luminaire will be completely surrounded by water defines:
- a. Through-Wall Lighting Assembly
 - b. Wet-Niche Luminaire
 - c. No-Niche Luminaire
134. A luminaire intended for installation above or below the water without a niche defines:
- a. Through-Wall Lighting Assembly
 - b. Wet-Niche Luminaire
 - c. No-Niche Luminaire
135. A lighting assembly consisting of a luminaire intended for installation in the wall of a spa, hot tub, or storable pool, and a cord-and-plug-connected transformer defines:
- a. Fountain
 - b. Forming Shell
 - c. Dry-Niche Luminaire
 - d. Cord-and-Plug-Connected Lighting Assembly
136. A luminaire intended for installation in the floor or wall of a pool, spa, or fountain in a niche that is sealed against the entry of water defines:
- a. Fountain
 - b. Forming Shell
 - c. Dry-Niche Luminaire
 - d. Cord-and-Plug-Connected Lighting Assembly
137. A structure designed to support a wet-niche luminaire assembly and intended for mounting in a pool or fountain structure defines:
- a. Fountain
 - b. Forming Shell

- c. Dry-Niche Luminaire
- d. Cord-and-Plug-Connected Lighting Assembly

138. Fountains, ornamental pools, display pools, and reflection pools. The definition does not include drinking fountains defines:

- a. Fountain
- b. Forming Shell
- c. Dry-Niche Luminaire
- d. Cord-and-Plug-Connected Lighting Assembly

682.2 Definitions.

Artificially Made Bodies of Water. Bodies of water that have been constructed or modified to fit some decorative or commercial purpose such as, but not limited to, aeration ponds, fish farm ponds, storm retention basins, treatment ponds, and irrigation (channel) facilities. Water depths may vary seasonally or be controlled.

Electrical Datum Plane. The electrical datum plane as used in this article is defined as follows:

(1) In land areas subject to tidal fluctuation, the electrical datum plane is a horizontal plane 600 mm (2 ft) above the highest tide level for the area occurring under normal circumstances, that is, highest high tide.

(2) In land areas not subject to tidal fluctuation, the electrical datum plane is a horizontal plane 600 mm (2 ft) above the highest water level for the area occurring under normal circumstances.

(3) In land areas subject to flooding, the electrical datum plane based on (1) or (2) above is a horizontal plane 600 mm (2 ft) above the point identified as the prevailing high water mark or an equivalent benchmark based on seasonal or storm-driven flooding from the authority having jurisdiction.

(4) The electrical datum plane for floating structures and landing stages that are (1) installed to permit rise and fall response to water level, without lateral movement, and (2) that are so equipped that they can rise to the datum plane established for (1) or (2) above, is a horizontal plane 750 mm (30 in.) above the water level at the floating structure or landing stage and a minimum of 300 mm (12 in.) above the level of the deck.

Equipotential Plane. An area where wire mesh or other conductive elements are on, embedded in, or placed under the walk surface within 75 mm (3 in.), bonded to all metal structures and fixed nonelectrical equipment that may become energized, and connected to the electrical grounding system to prevent a difference in voltage from developing within the plane.

Natural Bodies of Water. Bodies of water such as lakes, streams, ponds, rivers, and other naturally occurring bodies of water, which may vary in depth throughout the year.

Shoreline. The farthest extent of standing water under the applicable conditions that determine the electrical datum plane for the specified body of water.

690.2 Definitions.

Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module). A complete, environmentally protected unit consisting of solar cells, optics, inverter, and other components, exclusive of tracker, designed to generate ac power when exposed to sunlight.

Array. A mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required, to form a direct-current power-producing unit.

Bipolar Photovoltaic Array. A PV array that has two outputs, each having opposite polarity to a common reference point or center tap.

Blocking Diode. A diode used to block reverse flow of current into a PV source circuit.

Building Integrated Photovoltaics. Photovoltaic cells, devices, modules, or modular materials that are integrated into the outer surface or structure of a building and serve as the outer protective surface of that building.

DC-to-DC Converter. A device installed in the PV source circuit or PV output circuit that can provide an output dc voltage and current at a higher or lower value than the input dc voltage and current.

Direct-Current (dc) Combiner. A device used in the PV source and PV output circuits to combine two or more dc circuit inputs and provide one dc circuit output.

Diversion Charge Controller. Equipment that regulates the charging process of a battery by diverting power from energy storage to direct-current or alternating-current loads or to an interconnected utility service.

Electrical Production and Distribution Network. A power production, distribution, and utilization system, such as a utility system and connected loads, that is external to and not controlled by the PV power system.

Interactive System. A solar PV system that operates in parallel with and may deliver power to an electrical production and distribution network. For the purpose of this definition, an energy storage subsystem of a solar PV system, such as a battery, is not another electrical production source.

Inverter. Equipment that is used to change voltage level or waveform, or both, of electrical energy. Commonly, an inverter [also known as a power conditioning unit (PCU) or power conversion system (PSC)] is a device that changes dc input to an ac output. Inverters may also function as battery chargers that use alternating current from another source and convert it into direct current for charging batteries.

Inverter Input Circuit. Conductors between the inverter and the battery in stand-alone systems or the conductors between the inverter and the PV output circuits for electrical production and distribution network.
Inverter Output Circuit. Conductors between the inverter and an ac panel board for stand-alone systems or the conductors between the inverter and the service equipment or another electric power production source, such as a utility, for electrical production and distribution network.

Module. A complete, environmentally protected unit consisting of solar cells, optics, and other components, exclusive to sunlight.

Monopole Subarray. A PV subarray that has two conductors in the output circuit, one positive (+) and one negative(-). Two monopole PV subarrays are used to form a bipolar PV array.

Photo voltaic Output Circuit. Circuit conductors between the PV source circuit(s) and the inverter or dc utilization equipment.

Photovoltaic Power Source. An array or aggregate of arrays that generates dc power at system voltage and current.

Photovoltaic Source Circuit. Circuits between modules and from modules to the common connection point(s) of the dc system.

Photo voltaic System Voltage. The direct current (dc) voltage of any PV source or PV output circuit. For multiwire installations, the PV system voltage is the highest voltage between any two dc conductors.

Solar Cell. The basic PV device that generates electricity when exposed to light.

Stand-Alone System. A solar PV system that supplies power independently of an electrical production and distribution network.

Subarray. An electrical subset of a PV array.

139. A mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required, to form a direct-current power-producing unit defines:

- a. Subarray
- b. Stand-Alone System
- c. Bipolar Photovoltaic Array
- d. Array

140. A PV array that has two outputs, each having opposite polarity to a common reference point or center tap defines:

- a. Subarray
- b. Stand-Alone System
- c. Bipolar Photovoltaic Array
- d. Array

141. A solar PV system that supplies power independently of an electrical production and distribution network defines:

- a. Subarray
- b. Stand-Alone System
- c. Bipolar Photovoltaic Array
- d. Array

142. An electrical subset of a PV array defines:

- a. Subarray
- b. Stand-Alone System
- c. Bipolar Photovoltaic Array
- d. Array

143. Circuit conductors between the PV source circuit(s) and the inverter or dc utilization equipment defines:

- a. Photo voltaic Output Circuit

- b. Photovoltaic Power Source
 - c. Photovoltaic Source Circuit
 - d. Photo voltaic System Voltage
 - e. Solar Cell
144. An array or aggregate of arrays that generates dc power at system voltage and current defines:
- a. Photo voltaic Output Circuit
 - b. Photovoltaic Power Source
 - c. Photovoltaic Source Circuit
 - d. Photo voltaic System Voltage
 - e. Solar Cell
145. Circuits between modules and from modules to the common connection point(s) of the dc system defines:
- a. Photo voltaic Output Circuit
 - b. Photovoltaic Power Source
 - c. Photovoltaic Source Circuit
 - d. Photo voltaic System Voltage
 - e. Solar Cell
146. The direct current (dc) voltage of any PV source or PV output circuit. For multiwire installations, the PV system voltage is the highest voltage between any two de conductors defines:
- a. Photo voltaic Output Circuit
 - b. Photovoltaic Power Source
 - c. Photovoltaic Source Circuit
 - d. Photo voltaic System Voltage
 - e. Solar Cell
147. The basic PV device that generates electricity when exposed to light defines:
- a. Photo voltaic Output Circuit
 - b. Photovoltaic Power Source
 - c. Photovoltaic Source Circuit
 - d. Photo voltaic System Voltage
 - e. Solar Cell
148. A complete, environmentally protected unit consisting of solar cells, optics, inverter, and other components, exclusive of tracker, designed to generate ac power when exposed to sunlight defines:
- a. DC-to-DC Converter
 - b. Building Integrated Photovoltaics
 - c. Blocking Diode
 - d. Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module)
149. A diode used to block reverse flow of current into a PV source circuit defines:
- a. DC-to-DC Converter
 - b. Building Integrated Photovoltaics
 - c. Blocking Diode
 - d. Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module)
150. Photovoltaic cells, devices, modules, or modular materials that are integrated into the outer surface or structure of a building and serve as the outer protective surface of that building defines:
- a. DC-to-DC Converter
 - b. Building Integrated Photovoltaics
 - c. Blocking Diode
 - d. Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module)
151. A device installed in the PV source circuit or PV output circuit that can provide an output dc voltage and current at a higher or lower value than the input dc voltage and current defines:
- a. DC-to-DC Converter
 - b. Building Integrated Photovoltaics
 - c. Blocking Diode
 - d. Alternating-Current (ac) Module (Alternating-Current Photovoltaic Module)
152. A device used in the PV source and PV output circuits to combine two or more dc circuit inputs and provide one dc circuit output defines:

- a. Direct-Current (dc) Combiner
- b. Diversion Charge Controller
- c. Electrical Production and Distribution Network
- d. Interactive System

153. Equipment that regulates the charging process of a battery by diverting power from energy storage to direct-current or alternating-current loads or to an interconnected utility service defines:

- a. Direct-Current (dc) Combiner
- b. Diversion Charge Controller
- c. Electrical Production and Distribution Network
- d. Interactive System

154. A power production, distribution, and utilization system, such as a utility system and connected loads, that is external to and not controlled by the PV power system defines:

- a. Direct-Current (dc) Combiner
- b. Diversion Charge Controller
- c. Electrical Production and Distribution Network
- d. Interactive System

155. A solar PV system that operates in parallel with and may deliver power to an electrical production and distribution network. For the purpose of this definition, an energy storage subsystem of a solar PV system, such as a battery, is not another electrical production source defines:

- a. Direct-Current (dc) Combiner
- b. Diversion Charge Controller
- c. Electrical Production and Distribution Network
- d. Interactive System

156. Equipment that is used to change voltage level or waveform, or both, of electrical energy. Commonly, an inverter [also known as a power conditioning unit (PCU) or power conversion system (PSC)] is a device that changes dc input to an ac output. Inverters may also function as battery chargers that use alternating current from another source and convert it into direct current for charging batteries defines:

- a. Monopole Subarray
- b. Module
- c. Inverter Input Circuit
- d. Inverter

157. Conductors between the inverter and the battery in stand-alone systems or the conductors between the inverter and the PV output circuits for electrical production and distribution network defines:

- a. Monopole Subarray
- b. Module
- c. Inverter Input Circuit
- d. Inverter

158. Conductors between the inverter and an ac panel board for stand-alone systems or the conductors between the inverter and the service equipment or another electric power production source, such as a utility, for electrical production and distribution network defines:

- a. Monopole Subarray
- b. Module
- c. Inverter Input Circuit
- d. Inverter

159. A complete, environmentally protected unit consisting of solar cells, optics, and other components, exclusive to sunlight defines:

- a. Monopole Subarray
- b. Module
- c. Inverter Input Circuit
- d. Inverter

160. A PV subarray that has two conductors in the output circuit, one positive (+) and one negative(-). Two monopole PV subarrays are used to form a bipolar PV array defines:

- a. Monopole Subarray
- b. Module

- c. Inverter Input Circuit
- d. Inverter

161. Bodies of water that have been constructed or modified to fit some decorative or commercial purpose such as, but not limited to, aeration ponds, fish farm ponds, storm retention basins, treatment ponds, and irrigation (channel) facilities. Water depths may vary seasonally or be controlled defines:

- a. Artificially Made Bodies of Water
- b. Equipotential Plane
- c. Natural Bodies of Water
- d. Shoreline

162. An area where wire mesh or other conductive elements are on, embedded in, or placed under the walk surface within 75 mm (3 in.), bonded to all metal structures and fixed nonelectrical equipment that may become energized, and connected to the electrical grounding system to prevent a difference in voltage from developing within the plane defines:

- a. Artificially Made Bodies of Water
- b. Equipotential Plane
- c. Natural Bodies of Water
- d. Shoreline

163. Bodies of water such as lakes, streams, ponds, rivers, and other naturally occurring bodies of water, which may vary in depth throughout the year defines:

- a. Artificially Made Bodies of Water
- b. Equipotential Plane
- c. Natural Bodies of Water
- d. Shoreline

164. The farthest extent of standing water under the applicable conditions that determine the electrical datum plane for the specified body of water defines:

- a. Artificially Made Bodies of Water
- b. Equipotential Plane
- c. Natural Bodies of Water
- d. Shoreline

692.2 Definitions.

Fuel Cell. An electrochemical system that consumes fuel to produce an electric current. In such cells, the main chemical reaction used for producing electric power is not combustion. However, there may be sources of combustion used within the overall cell system, such as reformers/fuel processors.

Fuel Cell System. The complete aggregate of equipment used to convert chemical fuel into usable electricity and typically consisting of a reformer, stack, power inverter, and auxiliary equipment.

Interactive System. A fuel cell system that operates in parallel with and may deliver power to an electrical production and distribution network. For the purpose of this definition, an energy storage subsystem of a fuel cell system, such as a battery, is not another electrical production source.

Maximum System Voltage. The highest fuel cell inverter output voltage between any ungrounded conductors present at accessible output terminals.

Output Circuit. The conductors used to connect the fuel cell system to its electrical point of delivery.

Point of Common Coupling. The point at which the power production and distribution network and the customer interface occurs in an interactive system. Typically, this is the load side of the power network meter.

Stand-Alone System. A fuel cell system that supplies power independently of an electrical production and distribution network.

694.2 Definitions.

Charge Controller. Equipment that controls dc voltage or dc current, or both, and that is used to charge a

Guy. A cable that mechanically supports a wind turbine tower.

Inverter Output Circuit. The conductors between an inverter and an ac panelboard for stand-alone systems, or the conductors between an inverter and service equipment or another electric power production source, such as a utility, for an electrical production and distribution network.

Maximum Output Power. The maximum 1 minute average power output a wind turbine produces in normal steady-state operation (instantaneous power output can be higher).

Maximum Voltage. The maximum voltage the wind turbine produces in operation including open circuit conditions.

Nacelle. An enclosure housing the alternator and other parts of a wind turbine.

Rated Power. The wind turbine's output power at a wind speed of 11 m/s (24.6 mph). If a turbine produces more power at lower wind speeds, the rated power is the wind turbine's output power at a wind speed less than 11 m/s that produces the greatest output power.

Tower. A pole or other structure that supports a wind turbine.

Wind Turbine. A mechanical device that converts wind energy to electrical energy.

Wind Turbine Output Circuit. The circuit conductors between the internal components of a small wind turbine (which might include an alternator, integrated rectifier, controller, and/or inverter) and other equipment.

Wind Turbine System. A small wind electric generating system.

165. The point at which the power production and distribution network and the customer interface occurs in an interactive system. Typically, this is the load side of the power network meter defines:

- a. Point of Common Coupling
- b. Stand-Alone System
- c. Charge Controller
- d. Guy
- e. Nacelle

166. A fuel cell system that supplies power independently of an electrical production and distribution network defines:

- a. Point of Common Coupling
- b. Stand-Alone System
- c. Charge Controller
- d. Guy
- e. Nacelle

167. Equipment that controls dc voltage or dc current, or both, and that is used to charge a battery or other energy storage device defines:

- a. Point of Common Coupling
- b. Stand-Alone System
- c. Charge Controller
- d. Guy
- e. Nacelle

168. A cable that mechanically supports a wind turbine tower defines:

- a. Point of Common Coupling
- b. Stand-Alone System
- c. Charge Controller
- d. Guy
- e. Nacelle

169. An enclosure housing the alternator and other parts of a wind turbine defines:

- a. Point of Common Coupling
- b. Stand-Alone System
- c. Charge Controller
- d. Guy
- e. Nacelle

170. The conductors between an inverter and an ac panelboard for stand-alone systems, or the conductors between an inverter and service equipment or another electric power production source, such as a utility, for an electrical production and distribution network defines:

- a. Inverter Output Circuit
- b. Maximum Output Power
- c. Maximum Voltage
- d. Rated Power
- e. Maximum System Voltage

171. The maximum 1 minute average power output a wind turbine produces in normal steady-state operation (instantaneous power output can be higher) defines:
- Inverter Output Circuit
 - Maximum Output Power
 - Maximum Voltage
 - Rated Power
 - Maximum System Voltage
172. The maximum voltage the wind turbine produces in operation including open circuit conditions defines:
- Inverter Output Circuit
 - Maximum Output Power
 - Maximum Voltage
 - Rated Power
 - Maximum System Voltage
173. The wind turbine's output power at a wind speed of 11 m/s (24.6 mph). If a turbine produces more power at lower wind speeds, the rated power is the wind turbine's output power at a wind speed less than 11 m/s that produces the greatest output power defines:
- Inverter Output Circuit
 - Maximum Output Power
 - Maximum Voltage
 - Rated Power
 - Maximum System Voltage
174. The highest fuel cell inverter output voltage between any ungrounded conductors present at accessible output terminals defines:
- Inverter Output Circuit
 - Maximum Output Power
 - Maximum Voltage
 - Rated Power
 - Maximum System Voltage
175. A pole or other structure that supports a wind turbine defines:
- Wind Turbine System
 - Wind Turbine Output Circuit
 - Wind Turbine
 - Tower
176. A mechanical device that converts wind energy to electrical energy defines:
- Wind Turbine System
 - Wind Turbine Output Circuit
 - Wind Turbine
 - Tower
177. The circuit conductors between the internal components of a small wind turbine (which might include an alternator, integrated rectifier, controller, and/or inverter) and other equipment defines:
- Wind Turbine System
 - Wind Turbine Output Circuit
 - Wind Turbine
 - Tower
178. A small wind electric generating system defines:
- Wind Turbine System
 - Wind Turbine Output Circuit
 - Wind Turbine
 - Tower
179. A fuel cell system that operates in parallel with and may deliver power to an electrical production and distribution network. For the purpose of this definition, an energy storage subsystem of a fuel cell system, such as a battery, is not another electrical production source defines:
- Output Circuit

- b. Maximum System Voltage
- c. Fuel Cell System
- d. Fuel Cell
- e. Interactive System

180. An electrochemical system that consumes fuel to produce an electric current. In such cells, the main chemical reaction used for producing electric power is not combustion. However, there may be sources of combustion used within the overall cell system, such as reformers/fuel processors defines:

- a. Output Circuit
- b. Maximum System Voltage
- c. Fuel Cell System
- d. Fuel Cell
- e. Interactive System

181. The complete aggregate of equipment used to convert chemical fuel into usable electricity and typically consisting of a reformer, stack, power inverter, and auxiliary equipment defines:

- a. Output Circuit
- b. Maximum System Voltage
- c. Fuel Cell System
- d. Fuel Cell
- e. Interactive System

182. The highest fuel cell inverter output voltage between any ungrounded conductors present at accessible output terminals defines:

- a. Output Circuit
- b. Maximum System Voltage
- c. Fuel Cell System
- d. Fuel Cell
- e. Interactive System

183. The conductors used to connect the fuel cell system to its electrical point of delivery defines:

- a. Output Circuit
- b. Maximum System Voltage
- c. Fuel Cell System
- d. Fuel Cell
- e. Interactive System

695.2 Definitions.

Fault-Tolerant External Control Circuits. Those control circuits either entering or leaving the fire pump controller enclosure, which if broken, disconnected, or shorted will not prevent the controller from starting the fire pump from all other internal or external means and may cause the controller to start the pump under these conditions.

On-Site Power Production Facility. The normal supply of electric power for the site that is expected to be constantly producing power.

On-Site Standby Generator. A facility producing electric power on site as the alternate supply of electric power. It differs from an on-site power production facility, in that it is not constantly producing power.

700.2 Definitions.

Emergency Systems. Those systems legally required and classed as emergency by municipal, state, federal, or other codes, or by any governmental agency having jurisdiction. These systems are intended to automatically supply illumination, power, or both, to designated areas and equipment in the event of failure of the normal supply or in the event of accident to elements of a system intended to supply, distribute, and control power and illumination essential for safety to human life.

Relay, Automatic Load Control. A device used to energize switched or normally-off lighting equipment from an emergency supply in the event of loss of the normal supply, and to de-energize or return the equipment to normal status when the normal supply by bypassing the dimming/switching controls, and to return the emergency lighting equipment to normal status when the device senses the normal supply has been restored.

701.2 Definition.

Legally Required Standby Systems. Those systems required and so classed as legally required standby by municipal, state, federal, or other codes or by any governmental agency having jurisdiction. These systems are intended to automatically supply power to selected loads (other than those classed as emergency systems) in the event of failure of the normal source.

702.2 Definition.

Optional Standby Systems. Those systems intended to supply power to public or private facilities or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply onsite generated power to selected loads either automatically or manually.

705.2 Definitions.

Multimode Inverter. Equipment having the capabilities of both the utility-interactive inverter and the stand-alone inverter.

Power Production Equipment. The generating source, and all distribution equipment associated with it, that generates electricity from a source other than a utility supplied service.

Utility-Interactive Inverter Output Circuit. The conductors between the utility interactive inverter and the service equipment or another electric power production source, such as a utility, for electrical production and distribution network.

708.2 Definitions.

Commissioning. The acceptance testing, integrated system testing, operational tune-up, and start-up testing is the process by which baseline test results verify the proper operation and sequence of operation of electrical equipment, in addition to developing baseline criteria by which future trend analysis can identify equipment deterioration.

Critical Operations Power Systems (COPS). Power systems for facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity.

Designated Critical Operations Areas (DCOA). Areas within a facility or site designated as requiring critical operations power.

Supervisory Control and Data Acquisition (SCADA). An electronic system that provides monitoring and controls for the operation of the critical operations power system. This can include the fire alarm system, security system, control of the HVAC, the start/stop/monitoring of the power supplies and electrical distribution system, annunciation and communications equipment to emergency personnel, facility occupants, and remote operators.

725.2 Definitions.

Abandoned Class 2, Class 3, and PLTC Cable. Installed Class 2, Class 3, and PLTC cable that is not terminated at equipment and not identified for future use with a tag.

Circuit Integrity (CI) Cable. Cable(s) used for remote control, signaling, or power-limited systems that supply critical circuits to ensure survivability for continued circuit operation for a specified time under fire conditions.

Class 1 Circuit. The portion of the wiring system between the load side of the overcurrent device or power-limited supply and the connected equipment.

Class 2 Circuit. The portion of the wiring system between the load side of a Class 2 power source and the connected equipment. Due to its power limitations, a Class 2 circuit considers safety from a fire initiation standpoint and provides acceptable protection from electric shock.

Class 3 Circuit. The portion of the wiring system between the load side of a Class 3 power source and the connected equipment. Due to its power limitations, a Class 3 circuit considers safety from a fire initiation standpoint. Since higher levels of voltage and current than for Class 2 are permitted, additional safeguards are specified to provide protection from an electric shock hazard that could be encountered.

727.2 Definition.

Type ITC Instrumentation Tray Cable. A factory assembly of two or more insulated conductors, with or without a grounding conductor(s), enclosed in a nonmetallic sheath.

184. Installed Class 2, Class 3, and PLTC cable that is not terminated at equipment and not identified for future use with a tag defines:

- a. Abandoned Class 2, Class 3, and PLTC Cable
- b. Class 1 Circuit
- c. Class 2 Circuit

- d. Class 3 Circuit
- e. Fault-Tolerant External Control Circuits

185. The portion of the wiring system between the load side of the overcurrent device or power-limited supply and the connected equipment defines:

- a. Abandoned Class 2, Class 3, and PLTC Cable
- b. Class 1 Circuit
- c. Class 2 Circuit
- d. Class 3 Circuit
- e. Fault-Tolerant External Control Circuits

186. The portion of the wiring system between the load side of a Class 2 power source and the connected equipment. Due to its power limitations, a Class 2 circuit considers safety from a fire initiation standpoint and provides acceptable protection from electric shock defines:

- a. Abandoned Class 2, Class 3, and PLTC Cable
- b. Class 1 Circuit
- c. Class 2 Circuit
- d. Class 3 Circuit
- e. Fault-Tolerant External Control Circuits

187. The portion of the wiring system between the load side of a Class 3 power source and the connected equipment. Due to its power limitations, a Class 3 circuit considers safety from a fire initiation standpoint. Since higher levels of voltage and current than for Class 2 are permitted, additional safeguards are specified to provide protection from an electric shock hazard that could be encountered defines:

- a. Abandoned Class 2, Class 3, and PLTC Cable
- b. Class 1 Circuit
- c. Class 2 Circuit
- d. Class 3 Circuit
- e. Fault-Tolerant External Control Circuits

188. Those control circuits either entering or leaving the fire pump controller enclosure, which if broken, disconnected, or shorted will not prevent the controller from starting the fire pump from all other internal or external means and may cause the controller to start the pump under these conditions defines:

- a. Abandoned Class 2, Class 3, and PLTC Cable
- b. Class 1 Circuit
- c. Class 2 Circuit
- d. Class 3 Circuit
- e. Fault-Tolerant External Control Circuits

189. The acceptance testing, integrated system testing, operational tune-up, and start-up testing is the process by which baseline test results verify the proper operation and sequence of operation of electrical equipment, in addition to developing baseline criteria by which future trend analysis can identify equipment deterioration defines:

- a. Commissioning
- b. Critical Operations Power Systems (COPS)
- c. Designated Critical Operations Areas (DCOA)
- d. Supervisory Control and Data Acquisition (SCADA)
- e. Fault-Tolerant External Control Circuits

190. Power systems for facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity defines:

- a. Commissioning
- b. Critical Operations Power Systems (COPS)
- c. Designated Critical Operations Areas (DCOA)
- d. Supervisory Control and Data Acquisition (SCADA)
- e. Fault-Tolerant External Control Circuits

191. Areas within a facility or site designated as requiring critical operations power defines:

- a. Commissioning
- b. Critical Operations Power Systems (COPS)
- c. Designated Critical Operations Areas (DCOA)

- d. Supervisory Control and Data Acquisition (SCADA)
- e. Fault-Tolerant External Control Circuits

192. An electronic system that provides monitoring and controls for the operation of the critical operations power system. This can include the fire alarm system, security system, control of the HVAC, the start/stop/monitoring of the power supplies and electrical distribution system, annunciation and communications equipment to emergency personnel, facility occupants, and remote operators defines:

- a. Commissioning
- b. Critical Operations Power Systems (COPS)
- c. Designated Critical Operations Areas (DCOA)
- d. Supervisory Control and Data Acquisition (SCADA)
- e. Fault-Tolerant External Control Circuit

193. Those control circuits either entering or leaving the fire pump controller enclosure, which if broken, disconnected, or shorted will not prevent the controller from starting the fire pump from all other internal or external means and may cause the controller to start the pump under these conditions defines:

- a. Commissioning
- b. Critical Operations Power Systems (COPS)
- c. Designated Critical Operations Areas (DCOA)
- d. Supervisory Control and Data Acquisition (SCADA)
- e. Fault-Tolerant External Control Circuits

194. The normal supply of electric power for the site that is expected to be constantly producing power defines:

- a. On-Site Power Production Facility
- b. On-Site Standby Generator
- c. Emergency Systems
- d. Relay, Automatic Load Control
- e. Type ITC Instrumentation Tray Cable

195. A facility producing electric power on site as the alternate supply of electric power. It differs from an on-site power production facility, in that it is not constantly producing power defines:

- a. On-Site Power Production Facility
- b. On-Site Standby Generator
- c. Emergency Systems
- d. Relay, Automatic Load Control
- e. Type ITC Instrumentation Tray Cable

196. Those systems legally required and classed as emergency by municipal, state, federal, or other codes, or by any governmental agency having jurisdiction. These systems are intended to automatically supply illumination, power, or both, to designated areas and equipment in the event of failure of the normal supply or in the event of accident to elements of a system intended to supply, distribute, and control power and illumination essential for safety to human life defines:

- a. On-Site Power Production Facility
- b. On-Site Standby Generator
- c. Emergency Systems
- d. Relay, Automatic Load Control
- e. Type ITC Instrumentation Tray Cable

197. A device used to energize switched or normally-off lighting equipment from an emergency supply in the event of loss of the normal supply, and to de-energize or return the equipment to normal status when the normal supply by bypassing the dimming/switching controls, and to return the emergency lighting equipment to normal status when the device senses the normal supply has been restored defines:

- a. On-Site Power Production Facility
- b. On-Site Standby Generator
- c. Emergency Systems
- d. Relay, Automatic Load Control
- e. Type ITC Instrumentation Tray Cable

198. A factory assembly of two or more insulated conductors, with or without a grounding conductor(s), enclosed in a nonmetallic sheath defines:

- a. On-Site Power Production Facility

- b. On-Site Standby Generator
- c. Emergency Systems
- d. Relay, Automatic Load Control
- e. Type ITC Instrumentation Tray Cable

199. Those systems required and so classed as legally required standby by municipal, state, federal, or other codes or by any governmental agency having jurisdiction. These systems are intended to automatically supply power to selected loads (other than those classed as emergency systems) in the event of failure of the normal source defines:

- a. Legally Required Standby Systems
- b. Optional Standby Systems
- c. Multimode Inverter
- d. Power Production Equipment
- e. Utility-Interactive Inverter Output Circuit

200. Those systems intended to supply power to public or private facilities or property where life safety does not depend on the performance of the system. Optional standby systems are intended to supply onsite generated power to selected loads either automatically or manually defines:

- a. Legally Required Standby Systems
- b. Optional Standby Systems
- c. Multimode Inverter
- d. Power Production Equipment
- e. Utility-Interactive Inverter Output Circuit

201. Equipment having the capabilities of both the utility-interactive inverter and the stand-alone inverter defines:

- a. Legally Required Standby Systems
- b. Optional Standby Systems
- c. Multimode Inverter
- d. Power Production Equipment
- e. Utility-Interactive Inverter Output Circuit

202. The generating source, and all distribution equipment associated with it, that generates electricity from a source other than a utility supplied service defines:

- a. Legally Required Standby Systems
- b. Optional Standby Systems
- c. Multimode Inverter
- d. Power Production Equipment
- e. Utility-Interactive Inverter Output Circuit

203. The conductors between the utility interactive inverter and the service equipment or another electric power production source, such as a utility, for electrical production and distribution network defines:

- a. Legally Required Standby Systems
- b. Optional Standby Systems
- c. Multimode Inverter
- d. Power Production Equipment
- e. Utility-Interactive Inverter Output Circuit

760.2 Definitions.

Abandoned Fire Alarm Cable. Installed fire alarm cable that is not terminated at equipment other than a connector and not identified for future use with a tag.

Fire Alarm Circuit. The portion of the wiring system between the load side of the overcurrent device or the power-limited supply and the connected equipment of all circuits powered and controlled by the fire alarm system. Fire alarm circuits are classified as either non-powerlimited or power-limited.

Fire Alarm Circuit Integrity (CI) Cable. Cable used in fire alarm systems to ensure continued operation of critical circuits during a specified time under fire conditions.

Non-Power-Limited Fire Alarm Circuit (NPLFA). A fire alarm circuit powered by a source that complies with 760.41 and 760.43.

Power-Limited Fire Alarm Circuit (PLFA). A fire alarm circuit powered by a source that complies with 760.121.

770.2 Definitions.

Abandoned Optical Fiber Cable. Installed optical fiber cable that is not terminated at equipment other than a connector and not identified for future use with a tag.

Cable Routing Assembly. A single channel or connected multiple channels, as well as associated fittings, forming a structural system that is used to support, route and protect high densities of wires and cables, typically communications wires and cables, optical fiber and data (Class 2 and Class 3) cables associated with information technology and communications equipment.

Cable Sheath. A covering over the optical fiber assembly that includes one or more jackets and may include one or more metallic members or strength members.

Composite Optical Fiber Cable. A cable containing optical fibers and current-carrying electrical conductors.

Conductive Optical Fiber Cable. A factory assembly of one or more optical fibers having an overall covering and containing non-current-carrying conductive member(s) such as metallic strength member(s), metallic vapor barrier(s), metallic armor or metallic sheath.

Electrical Circuit Protective System. A system consisting of components and materials intended for installation as protection for specific electrical wiring systems with respect to the disruption of electrical circuit integrity upon exterior fire exposure.

Exposed (to Accidental Contact). A conductive optical fiber cable in such a position that, in case of failure of supports or insulation, contact between the cable's non-current-carrying conductive members and an electrical circuit may result.

Nonconductive Optical Fiber Cable. A factory assembly of one or more optical fibers having an overall covering and containing no electrically conductive materials.

Optical Fiber Cable. A factory assembly of one or more optical fibers, having an overall covering, that transmits light for control, signaling, and communications.

Optical Fiber Raceway. An enclosed channel of nonmetallic materials designed for holding optical fiber cables in plenum, riser, and general-purpose applications.

Point of Entrance. The point within a building at which the cable emerges from an external wall, from a concrete floor slab, or from a rigid metal conduit (Type RMC) or an intermediate metal conduit (Type IMC) connected by a grounding conductor to an electrode in accordance with 770.100(B).

204. Installed optical fiber cable that is not terminated at equipment other than a connector and not identified for future use with a tag defines:

- a. Abandoned Optical Fiber Cable
- b. Nonconductive Optical Fiber Cable
- c. Optical Fiber Cable
- d. Optical Fiber Raceway
- e. Point of Entrance

205. A factory assembly of one or more optical fibers having an overall covering and containing no electrically conductive materials defines:

- a. Abandoned Optical Fiber Cable
- b. Nonconductive Optical Fiber Cable
- c. Optical Fiber Cable
- d. Optical Fiber Raceway
- e. Point of Entrance

206. A factory assembly of one or more optical fibers, having an overall covering, that transmits light for control, signaling, and communications defines:

- a. Abandoned Optical Fiber Cable
- b. Nonconductive Optical Fiber Cable
- c. Optical Fiber Cable
- d. Optical Fiber Raceway
- e. Point of Entrance

207. An enclosed channel of nonmetallic materials designed for holding optical fiber cables in plenum, riser, and general-purpose applications defines:

- a. Abandoned Optical Fiber Cable
- b. Nonconductive Optical Fiber Cable
- c. Optical Fiber Cable
- d. Optical Fiber Raceway
- e. Point of Entrance

208. The point within a building at which the cable emerges from an external wall, from a concrete floor slab, or from a rigid metal conduit (Type RMC) or an intermediate metal conduit (Type IMC) connected by a grounding conductor to an electrode in accordance with 770.100(B) defines:

- a. Abandoned Optical Fiber Cable
- b. Nonconductive Optical Fiber Cable
- c. Optical Fiber Cable
- d. Optical Fiber Raceway
- e. Point of Entrance

209. Installed fire alarm cable that is not terminated at equipment other than a connector and not identified for future use with a tag defines:

- a. Abandoned Fire Alarm Cable
- b. Fire Alarm Circuit
- c. Fire Alarm Circuit Integrity (CI) Cable
- d. Non-Power-Limited Fire Alarm Circuit (NPLFA)
- e. Power-Limited Fire Alarm Circuit (PLFA)

210. The portion of the wiring system between the load side of the overcurrent device or the power-limited supply and the connected equipment of all circuits powered and controlled by the fire alarm system. Fire alarm circuits are classified as either non-power-limited or power-limited defines:

- a. Abandoned Fire Alarm Cable
- b. Fire Alarm Circuit
- c. Fire Alarm Circuit Integrity (CI) Cable
- d. Non-Power-Limited Fire Alarm Circuit (NPLFA)
- e. Power-Limited Fire Alarm Circuit (PLFA)

211. Cable used in fire alarm systems to ensure continued operation of critical circuits during a specified time under fire conditions defines:

- a. Abandoned Fire Alarm Cable
- b. Fire Alarm Circuit
- c. Fire Alarm Circuit Integrity (CI) Cable
- d. Non-Power-Limited Fire Alarm Circuit (NPLFA)
- e. Power-Limited Fire Alarm Circuit (PLFA)

212. A fire alarm circuit powered by a source that complies with 760.41 and 760.43 defines:

- a. Abandoned Fire Alarm Cable
- b. Fire Alarm Circuit
- c. Fire Alarm Circuit Integrity (CI) Cable
- d. Non-Power-Limited Fire Alarm Circuit (NPLFA)
- e. Power-Limited Fire Alarm Circuit (PLFA)

213. A fire alarm circuit powered by a source that complies with 760.121 defines:

- a. Abandoned Fire Alarm Cable
- b. Fire Alarm Circuit
- c. Fire Alarm Circuit Integrity (CI) Cable
- d. Non-Power-Limited Fire Alarm Circuit (NPLFA)
- e. Power-Limited Fire Alarm Circuit (PLFA)

214. A single channel or connected multiple channels, as well as associated fittings, forming a structural system that is used to support, route and protect high densities of wires and cables, typically communications wires and cables, optical fiber and data (Class 2 and Class 3) cables associated with information technology and communications equipment defines:

- a. Cable Routing Assembly
- b. Cable Sheath
- c. Composite Optical Fiber Cable

215. A covering over the optical fiber assembly that includes one or more jackets and may include one or more metallic members or strength members defines:
- Cable Routing Assembly
 - Cable Sheath
 - Composite Optical Fiber Cable
216. A cable containing optical fibers and current-carrying electrical conductors defines:
- Cable Routing Assembly
 - Cable Sheath
 - Composite Optical Fiber Cable
217. A factory assembly of one or more optical fibers having an overall covering and containing non-current-carrying conductive member(s) such as metallic strength member(s), metallic vapor barrier(s), metallic armor or metallic sheath defines:
- Conductive Optical Fiber Cable
 - Electrical Circuit Protective System
 - Exposed (to Accidental Contact)
218. A system consisting of components and materials intended for installation as protection for specific electrical wiring systems with respect to the disruption of electrical circuit integrity upon exterior fire exposure defines:
- Conductive Optical Fiber Cable
 - Electrical Circuit Protective System
 - Exposed (to Accidental Contact)
219. A conductive optical fiber cable in such a position that, in case of failure of supports or insulation, contact between the cable's non-current-carrying conductive members and an electrical circuit may result defines:
- Conductive Optical Fiber Cable
 - Electrical Circuit Protective System
 - Exposed (to Accidental Contact)

800.2 Definitions.

Abandoned Communications Cable. Installed communications cable that is not terminated at both ends at a connector or other equipment and not identified for future use with a tag.

Block. A square or portion of a city, town, or village enclosed by streets and including the alleys so enclosed, but not any street.

Cable. A factory assembly of two or more conductors having an overall covering.

Cable Sheath. A covering over the conductor assembly that may include one or more metallic members, strength members, or jackets.

Communications Circuit. The circuit that extends voice, audio, video, data, interactive services, telegraph (except radio), outside wiring for fire alarm and burglar alarm from the communications utility to the customer's communications equipment up to and including terminal equipment such as a telephone, fax machine, or answering machine.

Communications Circuit Integrity (CI) Cable. Cable used in communications systems to ensure continued operation of critical circuits during a specified time under fire conditions.

Communications Raceway. An enclosed channel of nonmetallic materials designed for holding communications wires and cables in plenum, riser, and general-purpose applications.

Wire. A factory assembly of one or more insulated conductors without an overall covering.

820.2 Definitions. See Article 100. For the purposes of this article, the following additional definitions apply.

Abandoned Coaxial Cable. Installed coaxial cable that is not terminated at equipment other than a coaxial connector and not identified for future use with a tag.

Coaxial Cable. A cylindrical assembly composed of a conductor centered inside a metallic tube or shield, separated by a dielectric material, and usually covered by an insulating jacket.

Exposed (to Accidental Contact). A circuit in such a position that, in case of failure of supports and or insulation, contact with another circuit may result.

Point of Entrance. The point within a building at which the coaxial cable emerges from an external wall, from a concrete floor slab, from rigid metal conduit (RMC), or from intermediate metal conduit (IMC).

Premises. The land and buildings of a user located on the user side of utility-user network point of demarcation.

220. Installed coaxial cable that is not terminated at equipment other than a coaxial connector and not identified for future use with a tag defines:
- Abandoned Coaxial Cable
 - Coaxial Cable
 - Exposed (to Accidental Contact)
 - Point of Entrance
 - Premises.
221. A cylindrical assembly composed of a conductor centered inside a metallic tube or shield, separated by a dielectric material, and usually covered by an insulating jacket defines:
- Abandoned Coaxial Cable
 - Coaxial Cable
 - Exposed (to Accidental Contact)
 - Point of Entrance
 - Premises.
222. A circuit in such a position that, in case of failure of supports and or insulation, contact with another circuit may result defines:
- Abandoned Coaxial Cable
 - Coaxial Cable
 - Exposed (to Accidental Contact)
 - Point of Entrance
 - Premises.
223. The point within a building at which the coaxial cable emerges from an external wall, from a concrete floor slab, from rigid metal conduit (RMC) , or from intermediate metal conduit (IMC) defines:
- Abandoned Coaxial Cable
 - Coaxial Cable
 - Exposed (to Accidental Contact)
 - Point of Entrance
 - Premises.
224. The land and buildings of a user located on the user side of utility-user network point of demarcation defines:
- Abandoned Coaxial Cable
 - Coaxial Cable
 - Exposed (to Accidental Contact)
 - Point of Entrance
 - Premises.
225. Installed communications cable that is not terminated at both ends at a connector or other equipment and not identified for future use with a tag defines:
- Abandoned Communications Cable
 - Block
 - Cable
 - Wire
226. A square or portion of a city, town, or village enclosed by streets and including the alleys so enclosed, but not any street defines:
- Abandoned Communications Cable
 - Block
 - Cable
 - Wire
227. A factory assembly of two or more conductors having an overall covering defines:
- Abandoned Communications Cable
 - Block
 - Cable
 - Wire
228. A factory assembly of one or more insulated conductors without an overall covering defines:

- a. Abandoned Communications Cable
- b. Block
- c. Cable
- d. Wire

229. A covering over the conductor assembly that may include one or more metallic members, strength members, or jackets defines:

- a. Cable Sheath
- b. Communications Circuit
- c. Communications Circuit Integrity (CI) Cable
- d. Communications Raceway

230. The circuit that extends voice, audio, video, data, interactive services, telegraph (except radio), outside wiring for fire alarm and burglar alarm from the communications utility to the customer's communications equipment up to and including terminal equipment such as a telephone, fax machine, or answering machine defines:

- a. Cable Sheath
- b. Communications Circuit
- c. Communications Circuit Integrity (CI) Cable
- d. Communications Raceway

231. Cable used in communications systems to ensure continued operation of critical circuits during a specified time under fire conditions defines:

- a. Cable Sheath
- b. Communications Circuit
- c. Communications Circuit Integrity (CI) Cable
- d. Communications Raceway

232. An enclosed channel of nonmetallic materials designed for holding communications wires and cables in plenum, riser, and general-purpose applications defines:

- a. Cable Sheath
- b. Communications Circuit
- c. Communications Circuit Integrity (CI) Cable
- d. Communications Raceway

830.2 Definitions.

Abandoned Network-Powered Broadband Communications Cable. Installed network-powered broadband communications cable that is not terminated at equipment other than a connector and not identified for future use with a tag.

Exposed (to Accidental Contact). A circuit in such a position that, in case of failure of supports or insulation, contact with another circuit may result.

Fault Protection Device. An electronic device that is intended for the protection of personnel and functions under fault conditions, such as network-powered broadband communications cable short or open circuit, to limit the current or voltage, or both, for a low-power network-powered broadband communications circuit and provide acceptable protection from electric shock.

Network Interface Unit (NIU). A device that converts a broadband signal into component voice, audio, video, data, and interactive services signals. The NIU provides isolation between the network power and the premises signal circuits. The NIU may also contain primary and secondary protectors.

Network-Powered Broadband Communications Circuit. The circuit extending from the communications utility's serving terminal or tap up to and including the NIU.

840.2 Definitions.

Fiber-to-the-Premises (FTTP). Conductive or nonconductive optical cable that is either aerial, buried, or through a raceway and is terminated at an optical network terminal (ONT) and establishing a communications network.

Optical Network Terminal (ONT). A device that converts an optical signal into component signals, including voice, audio, video, data, wireless, and interactive service electrical, and is considered to be network interface equipment.

Premises Communications Circuit. The circuit that extends voice, audio, video, data, interactive services, telegraph (except radio), and outside wiring for fire alarm and burglar alarm from the service provider's ONT to the customer's communications equipment up to and including terminal equipment, such as a telephone, a fax machine, or an answering machine.

Premises Community Antenna Television (CATV) Circuit. The circuit that extends community antenna television (CATV) systems for audio, video, data, and interactive services from the service provider's ONT to the appropriate customer equipment.

233. Conductive or nonconductive optical cable that is either aerial, buried, or through a raceway and is terminated at an optical network terminal (ONT) and establishing a communications network defines:

- a. Fiber-to-the-Premises (FTTP)
- b. Optical Network Terminal (ONT)
- c. Premises Communications Circuit
- d. Premises Community Antenna Television (CATV) Circuit

234. A device that converts an optical signal into component signals, including voice, audio, video, data, wireless, and interactive service electrical, and is considered to be network interface equipment defines:

- a. Fiber-to-the-Premises (FTTP)
- b. Optical Network Terminal (ONT)
- c. Premises Communications Circuit
- d. Premises Community Antenna Television (CATV) Circuit

235. The circuit that extends voice, audio, video, data, interactive services, telegraph (except radio), and outside wiring for fire alarm and burglar alarm from the service provider's ONT to the customer's communications equipment up to and including terminal equipment, such as a telephone, a fax machine, or an answering machine defines:

- a. Fiber-to-the-Premises (FTTP)
- b. Optical Network Terminal (ONT)
- c. Premises Communications Circuit
- d. Premises Community Antenna Television (CATV) Circuit

236. The circuit that extends community antenna television (CATV) systems for audio, video, data, and interactive services from the service provider's ONT to the appropriate customer equipment defines:

- a. Fiber-to-the-Premises (FTTP)
- b. Optical Network Terminal (ONT)
- c. Premises Communications Circuit
- d. Premises Community Antenna Television (CATV) Circuit

237. A circuit in such a position that, in case of failure of supports or insulation, contact with another circuit may result defines:

- a. Exposed (to Accidental Contact)
- b. Fault Protection Device
- c. Network Interface Unit (NIU)
- d. Abandoned Network-Powered Broadband Communications Cable

238. An electronic device that is intended for the protection of personnel and functions under fault conditions, such as network-powered broadband communications cable short or open circuit, to limit the current or voltage, or both, for a low-power network-powered broadband communications circuit and provide acceptable protection from electric shock defines:

- a. Exposed (to Accidental Contact)
- b. Fault Protection Device
- c. Network Interface Unit (NIU)
- d. Abandoned Network-Powered Broadband Communications Cable

239. A device that converts a broadband signal into component voice, audio, video, data, and interactive services signals. The NIU provides isolation between the network power and the premises signal circuits. The NIU may also contain primary and secondary protectors defines:

- a. Exposed (to Accidental Contact)
- b. Fault Protection Device

- c. Network Interface Unit (NIU)
- d. Abandoned Network-Powered Broadband Communications Cable

240. Installed network-powered broadband communications cable that is not terminated at equipment other than a connector and not identified for future use with a tag defines:

- a. Exposed (to Accidental Contact)
- b. Fault Protection Device
- c. Network Interface Unit (NIU)
- d. Abandoned Network-Powered Broadband Communications Cable

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| | | | | | |
|----|-----------|----|-----------|-----|-----------|
| 1 | a b c d e | 41 | a b c d e | 81 | a b c d e |
| 2 | a b c d e | 42 | a b c d e | 82 | a b c d e |
| 3 | a b c d e | 43 | a b c d e | 83 | a b c d e |
| 4 | a b c d e | 44 | a b c d e | 84 | a b c d e |
| 5 | a b c d e | 45 | a b c d e | 85 | a b c d e |
| 6 | a b c d e | 46 | a b c d e | 86 | a b c d e |
| 7 | a b c d e | 47 | a b c d e | 87 | a b c d e |
| 8 | a b c d e | 48 | a b c d e | 88 | a b c d e |
| 9 | a b c d e | 49 | a b c d e | 89 | a b c d e |
| 10 | a b c d e | 50 | a b c d e | 90 | a b c d e |
| 11 | a b c d e | 51 | a b c d e | 91 | a b c d e |
| 12 | a b c d e | 52 | a b c d e | 92 | a b c d e |
| 13 | a b c d e | 53 | a b c d e | 93 | a b c d e |
| 14 | a b c d e | 54 | a b c d e | 94 | a b c d e |
| 15 | a b c d e | 55 | a b c d e | 95 | a b c d e |
| 16 | a b c d e | 56 | a b c d e | 96 | a b c d e |
| 17 | a b c d e | 57 | a b c d e | 97 | a b c d e |
| 18 | a b c d e | 58 | a b c d e | 98 | a b c d e |
| 19 | a b c d e | 59 | a b c d e | 99 | a b c d e |
| 20 | a b c d e | 60 | a b c d e | 100 | a b c d e |
| 21 | a b c d e | 61 | a b c d e | 101 | a b c d e |
| 22 | a b c d e | 62 | a b c d e | 102 | a b c d e |
| 23 | a b c d e | 63 | a b c d e | 103 | a b c d e |
| 24 | a b c d e | 64 | a b c d e | 104 | a b c d e |
| 25 | a b c d e | 65 | a b c d e | 105 | a b c d e |
| 26 | a b c d e | 66 | a b c d e | 106 | a b c d e |
| 27 | a b c d e | 67 | a b c d e | 107 | a b c d e |
| 28 | a b c d e | 68 | a b c d e | 108 | a b c d e |
| 29 | a b c d e | 69 | a b c d e | 109 | a b c d e |
| 30 | a b c d e | 70 | a b c d e | 110 | a b c d e |
| 31 | a b c d e | 71 | a b c d e | 111 | a b c d e |
| 32 | a b c d e | 72 | a b c d e | 112 | a b c d e |
| 33 | a b c d e | 73 | a b c d e | 113 | a b c d e |
| 34 | a b c d e | 74 | a b c d e | 114 | a b c d e |
| 35 | a b c d e | 75 | a b c d e | 115 | a b c d e |
| 36 | a b c d e | 76 | a b c d e | 116 | a b c d e |
| 37 | a b c d e | 77 | a b c d e | 117 | a b c d e |
| 38 | a b c d e | 78 | a b c d e | 118 | a b c d e |
| 39 | a b c d e | 79 | a b c d e | 119 | a b c d e |
| 40 | a b c d e | 80 | a b c d e | 120 | a b c d e |

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| | | | | | |
|-----|-----------|-----|-----------|-----|-----------|
| 121 | a b c d e | 161 | a b c d e | 201 | a b c d e |
| 122 | a b c d e | 162 | a b c d e | 202 | a b c d e |
| 123 | a b c d e | 163 | a b c d e | 203 | a b c d e |
| 124 | a b c d e | 164 | a b c d e | 204 | a b c d e |
| 125 | a b c d e | 165 | a b c d e | 205 | a b c d e |
| 126 | a b c d e | 166 | a b c d e | 206 | a b c d e |
| 127 | a b c d e | 167 | a b c d e | 207 | a b c d e |
| 128 | a b c d e | 168 | a b c d e | 208 | a b c d e |
| 129 | a b c d e | 169 | a b c d e | 209 | a b c d e |
| 130 | a b c d e | 170 | a b c d e | 210 | a b c d e |
| 131 | a b c d e | 171 | a b c d e | 211 | a b c d e |
| 132 | a b c d e | 172 | a b c d e | 212 | a b c d e |
| 133 | a b c d e | 173 | a b c d e | 213 | a b c d e |
| 134 | a b c d e | 174 | a b c d e | 214 | a b c d e |
| 135 | a b c d e | 175 | a b c d e | 215 | a b c d e |
| 136 | a b c d e | 176 | a b c d e | 216 | a b c d e |
| 137 | a b c d e | 177 | a b c d e | 217 | a b c d e |
| 138 | a b c d e | 178 | a b c d e | 218 | a b c d e |
| 139 | a b c d e | 179 | a b c d e | 219 | a b c d e |
| 140 | a b c d e | 180 | a b c d e | 220 | a b c d e |
| 141 | a b c d e | 181 | a b c d e | 221 | a b c d e |
| 142 | a b c d e | 182 | a b c d e | 222 | a b c d e |
| 143 | a b c d e | 183 | a b c d e | 223 | a b c d e |
| 144 | a b c d e | 184 | a b c d e | 224 | a b c d e |
| 145 | a b c d e | 185 | a b c d e | 225 | a b c d e |
| 146 | a b c d e | 186 | a b c d e | 226 | a b c d e |
| 147 | a b c d e | 187 | a b c d e | 227 | a b c d e |
| 148 | a b c d e | 188 | a b c d e | 228 | a b c d e |
| 149 | a b c d e | 189 | a b c d e | 229 | a b c d e |
| 150 | a b c d e | 190 | a b c d e | 230 | a b c d e |
| 151 | a b c d e | 191 | a b c d e | 231 | a b c d e |
| 152 | a b c d e | 192 | a b c d e | 232 | a b c d e |
| 153 | a b c d e | 193 | a b c d e | 233 | a b c d e |
| 154 | a b c d e | 194 | a b c d e | 234 | a b c d e |
| 155 | a b c d e | 195 | a b c d e | 235 | a b c d e |
| 156 | a b c d e | 196 | a b c d e | 236 | a b c d e |
| 157 | a b c d e | 197 | a b c d e | 237 | a b c d e |
| 158 | a b c d e | 198 | a b c d e | 238 | a b c d e |
| 159 | a b c d e | 199 | a b c d e | 239 | a b c d e |
| 160 | a b c d e | 200 | a b c d e | 240 | a b c d e |

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