Prepared by: MZGD



PG&E-APPROVED ELECTRIC DISTRIBUTION MATERIALS MANUFACTURERS

066211

Asset Type: Electric Distribution

Issued by: Michael Thibault (MLTC)

Function: Design

Date: 06-30-23

Rev. #27: This document replaces PG&E Document 066211, Rev. #26 For a description of the changes, see Page 4.

Purpose and Scope

This document provides a list of PG&E-approved manufacturers of major materials for use in PG&E's Electric Distribution System.

 Table 1
 PG&E-Approved Electric Distribution Materials Manufacturers

Material	Responsible Engineer	Approved Manufacturer
Arresters	Nima Shirkhani	ABB, (Hitachi)
Barrier Posts	M.L. Thibault	Allwire
Brackets, Overhead	Lise Phan	Aluma-Form, Chance, Joslyn, Kortick, MacLean
Cable, Primary	Lisseth Villareal	Okonite, Prysmian, Southwire ²
Cable, Aluminum, Secondary	Lisseth Villareal	Prysmian (General Cable) ² , Southwire
Cable, Copper, Secondary	Lisseth Villareal	Okonite
Capacitor Controls	Miguel Plascencia	HD Electric, S&C (Energyline)
Capacitor, Overhead	Miguel Plascencia	ABB, Cooper
Capacitor, Pad-Mounted	Miguel Plascencia	Scott Engineering
New Design of Cable-in-Conduit (CIC)	Lisseth Villareal	Southwire, Okonite/Duraline
Conduit, HDPE Schedule 80, SDR 13.5, UL 651A for Boring	Lisseth Villareal	Dura-Line (AD Technologies)
Conduit, Smooth Core Flex	Lisseth Villareal	Dura-Line (AD Technologies)
Conduit, PVC Schedule 40 and 80, UL 651, 90°C for Boring	Lisseth Villareal	Prime Conduits (Carlon Bore-Gard)
Conduit, PVC Schedule 40 and 80, UL 651, 90°C, Solid Core	Lisseth Villareal	Atkore, Ridgeline Pipe Heritage, Prime (conduit), JM Eagle, Cantex
Conduit,PVC Schedule 40, UL 651, 90°C Cellular Core	Lisseth Villareal	Atkore (Cor-Tek)
Conduit, Steel	Lisseth Villareal	Allied, Western Tube
Conduit Fittings, PVC Schedule 40 and 80	Lisseth Villareal	Atkore, Prime Conduit (Carlon), JM Eagle, Krayloy/Ipex/Scepter
Conduit Fittings, HDPE	Lisseth Villareal	Duraline
Conduit Fittings, Steel	Lisseth Villareal	Picoma, Shamrock
Conductor, Overhead, AWAC Neutral Only	Genet Mengistu	Prysmian (General Cable) ² , Southwire
Conductor, Overhead Covered Tree Wire	Genet Mengistu	Southwire, Taihan, Hendrix ⁵
Connectors, Overhead, Automatic Splice ⁴	Genet Mengistu	Blackburn, Fargo, Reliable
Connectors, Overhead, Compression Splice	Genet Mengistu	Alcoa, Blackburn, Burndy, Homac, Hubbell, Nicopress
Connectors, Overhead, Tap Clamp	Genet Mengistu	Hubbell, Maclean
Connectors, Overhead, Wedge Tap	Genet Mengistu	TE Connectivity (AMP)
Connectors, Underground, Compression, Splice	Lisseth Villareal	Blackburn, Burndy, Homac, Hubbell, Kearney, Penn Union

Rev. #27: 06-30-23 **066211 Page 1 of 4**

PG&E-Approved Electric Distribution Materials Manufacturers

Table 1 PG&E-Approved Electric Distribution Materials Manufacturers (continued)

Material	Responsible Engineer	Approved Manufacturer
Connectors, Underground, Pin Terminal	Lisseth Villareal	Homac
Connectors, Underground, Secondary Multi-Tap Bars	Lisseth Villareal	Blackburn, Homac
Connectors, UG Ground Lug Equipment	Lisseth Villareal	Hubbell, H – J
Connectors, Underground, Slip-Fit Transformer Secondary Bars	Lisseth Villareal	Homac, Utilco
Connectors, Underground, Shearbolt	Lisseth Villareal	TE-Connectivity
Connectors, Underground, Spade Terminals	Lisseth Villareal	Burndy, Dossert, Homac
Connectors, Underground, Split-Bolt	Lisseth Villareal	Blackburn, Burndy, Penn Union
Crossarm - Composite	Lise Phan	Kortick / PUPI
Crossarm - Wood	Lise Phan	Brooks MFG
Cutouts	Eric Vazquez	MacLean, Hubbell, S&C
Dead-Ends, Overhead	Genet Mengistu	EMC, Hubbell
Disconnect	Eric Vazquez	Eaton-Cooper
Elbows, 200 Amp	Lisseth Villareal	Eaton-Cooper, Elastimold
Elbows, 600 Amp cold shrink	Lisseth Villareal	Richards
Elbows, 600 Amp, premolded ¹	Lisseth Villareal	Eaton-Cooper, Elastimold, Richards,
600 Amp, EPDM CP and RTP components	Lisseth Villareal	Elastimold, Richards
Enclosure, Frames and Covers	Calvin Yu	Madruga Iron Works, Jensen Precast, Oldcastle Infrastructure
Enclosure, Primary – Box, Concrete	Calvin Yu	Jensen Precast, Oldcastle Infrastructure, Mid-State Concrete
Enclosure, Primary – Sectional Box, Concrete	Calvin Yu	Oldcastle Infrastructure
Enclosure, Primary – Sectional Box, Polymer-Concrete	Calvin Yu	Hubbell (Strongwell/Quazite)
Enclosure, Secondary – Box, Concrete	Calvin Yu	Jensen Precast, Oldcastle Infrastructure
Enclosure, Secondary – Box, Polymer-Concrete	Calvin Yu	Hubbell (Strongwell/Quazite), Armorcast, New Basis
Fault Indicator – Overhead	Lise Phan	Horstman/Power Delivery Products, SEL (Schwertzer)
Fault Indicator – Underground	Lise Phan	Horstman/Power Delivery Products
Fuses	Eric Vazquez	Chance, Combined-Tech, Eaton-Cooper, Hi-Tech, Kearny, S&C
Fuse Saver	Vernal Garcia	Siemens
Ground Rods	M.L. Thibault	Calpico, Eritech, Galvan, Nehring
Insulators, Dead-End, Silicon	Nima Shirkhani	MacLean, HPS (Hubbell), Advanced Rubber
Insulators, Line	Nima Shirkhani	HPS (Hubbell), MacLean, Hendrix, Preformed
Insulators, Standoff	Eric Vazquez	S&C
Interrupter – Pad-Mounted (In-Out)	Ryan Kowdley	Madruga, Elastimold
Interrupter - Pad-Mounted (Multi-Way)	Ryan Kowdley	ISG, Elastimold
Interrupter – Subsurface, 200 Amp	Ryan Kowdley	Trayer, Elastimold
Interrupter – Subsurface, 600 Amp	Ryan Kowdley	Trayer
Interrupter – Vault-Mounted	Ryan Kowdley	Elastimold, G&W

This material remains in the approved lists as a back up in case there is material shortage of the 600A Cold shrink elbow. Prior to ordering/installing this material get approval from PG&E inspection department.

Table 1 PG&E-Approved Electric Distribution Materials Manufacturers (continued)

066211 Page 2 of 4 Rev. #27: 06-30-23

PG&E-Approved Electric Distribution Materials Manufacturers

Material	Responsible Engineer	Approved Manufacturer
Junctions, Primary – Pad-Mounted	Ryan Kowdley	Madruga
Junctions, Primary – Subsurface	Ryan Kowdley	Elastimold (bus), Inertia (bracket)
Pad, Box, Interrupter, Polymer-Concrete	Ryan Kowdley	New Basis, Hubbell
Pad, Capacitor, Concrete	Miguel Plascencia	Jensen Precast, Oldcastle Infrastructure
Pad, Flat, Interrupter, Polymer-Concrete	Ryan Kowdley	Hubbell
Pad, Flat, Primary Junction, Polymer-Concrete	Ryan Kowdley	Hubbell, Oldcastle Infrastructure
Pad, Flat, Switch and Fuse, Concrete	Ryan Kowdley	Oldcastle Infrastructure, Jensen Precast
Pad, Transformer, Box, Polymer-Concrete	M.L. Thibault	Armorcast, CDR, New Basis, Strongwell/Quazite
Pad, Transformer, Concrete	M.L. Thibault	Jensen Precast, Mid-State Concrete, Structure Cast, Oldcastle Infrastructure
Photocontrol, Streetlight ³	Yap Emerson	ALR, DTL, Fisher Pierce, Sun-Tech
Poles, Wood, Distribution (taller than 35 feet)	Richard Kauzer	McFarland Cascade, Stella-Jones
Poles, Wood, Service	Richard Kauzer	Koppers, McFarland Cascade, Thunderbolt Wood Treating, Stella-Jones
Pulling Lubricant	Lisseth Villareal	Dura-Line (Arnco), Polywater
Non-detectable Polyester Pulling Tape	Lisseth Villareal	Dura-Line (Arnco), Herculine, Nepco, Wellington, Milliken
Detectable Polyester Pulling Tape	Lisseth Villareal	Neptco, Milliken
Recloser	Mike Lee	G&W
Recloser Controller	Vernal Garcia	Beckwith
Regulator, Voltage	Miguel Plascencia	Cooper, Howard Industries
Retaining Wall, Concrete	Calvin Yu	Jensen Precast, Oldcastle Infrastructure
Sectionalizer	Mike Lee	Eaton-Cooper
Splices, UG Insulated, Primary	Lisseth Villareal	3M, TE Connectivity (Raychem)
Cold-shrink Y and H Splices, UG Insulated Primary	Lisseth Villareal	Richards, TE Connectivity
Splices, UG Insulated, Secondary	Lisseth Villareal	ЗМ
Switches, Controllers, Overhead, SCADA	Mike Lee	S&C
Switches, Controllers, Underground, SCADA	Ryan Kowdley	S&C, Trayer
Switches, Fused – Pad-Mounted	Ryan Kowdley	S&C
Switches, Fused – Subsurface	Ryan Kowdley	ABB, Trayer
Switches, Overhead, Manual	Mike Lee	Eaton-Cooper, Inertia, S&C
Switches, Pad-Mounted	Ryan Kowdley	S&C
Switches, Subsurface 200 Amp, Manual	Ryan Kowdley	Trayer, ISG, Elastimold
Switches, Subsurface 600 Amp, Manual	Ryan Kowdley	Trayer, ISG
Switches, Vault-Mounted	Ryan Kowdley	Elastimold, G&W, ISG, Trayer

Rev. #27: 06-30-23 **066211 Page 3 of 4**

PG&E-Approved Electric Distribution Materials Manufacturers

Table 1 PG&E-Approved Electric Distribution Materials Manufacturers (continued)

Material	Responsible Engineer	Approved Manufacturer
Termination, Silicone Cold Shrink	Lisseth Villareal	3M, TE Connectivity (Raychem)
Transformer, Potential, Dry-Type, Outdoor Overhead	M.L. Thibault	ABB, GE
Transformer, Potential, Dry-Type, Submersible	M.L. Thibault	ABB, Arteche
Transformer, Potential, Liquid-Filled, Outdoor Overhead	M.L. Thibault	ABB, Howard
Transformers, Single-Phase Overhead	M.L. Thibault	Howard Industries, Power Partners
Transformers, Single-Phase Pad-Mounted	M.L. Thibault	ABB, Howard Industries
Transformers, Single-Phase Subsurface	M.L. Thibault	ABB, Howard Industries, Power Partners
Transformers, Single-Phase Subway	M.L. Thibault	ABB, Howard Industries
Transformers, Three-Phase Network, Dry-Type	M.L. Thibault	ABB
Transformers, Three-Phase Network, Liquid Filled	M.L. Thibault	ABB, GE, Carte
Transformers, Three-Phase Overhead	M.L. Thibault	Howard Industries, Power Partners
Transformers, Three-Phase Pad-Mounted	M.L. Thibault	ABB, Cooper, Howard Industries,
Transformers, Three-Phase Subsurface	M.L. Thibault	ABB, Howard Industries

Manufacturer approved for option 2 market only.

Notes

- 1. This document may be updated between Greenbook publishing. Contact your local PG&E representative to obtain the latest version.
- 2. Each approved manufacturer does not necessarily supply all of the approved variations in each commodity.
- 3. New Basis is the parent company of Associated Plastic Products and Associated Concrete International.

Revision Notes

Revision 27 has the following changes:

1. Updated Table 1 Page 1 and Page 3 to current approved manufacturers.

066211 Page 4 of 4 Rev. #27: 06-30-23

Fully electronic, utility grade, meeting ANSI C136.10 requirements, turn on at 1.0 \pm 0.2 foot candle (fc), turn off at 1.5 \pm 0.3 fc.

For AWAC neutral only.

⁵ Approved for 1/0-6/1 ACSR TW only.

Approved ONLY fo Power Interconnection Hub (PIH) Installations (refer to Table 46 in <u>Document 066201</u> Revision 27 or later) and 3.3MVA Transformers (Reference <u>Document 072146</u>).