

# REQUEST FOR PROPOSAL



## BURLINGTON ELECTRIC DEPARTMENT

585 Pine Street  
Burlington, VT 05401-4891  
Phone: 802-865-7456

ALL RFP'S RESPONSES ARE TO BE  
UPLOADED TO OUR SECURE  
WEB SITE USING YOUR UNIQUE LOGI

RFP #

**022-26**

DATE:

8/20/2024

### REQUEST FOR QUOTATION

THIS IS AN INQUIRY,  
NOT AN ORDER

PLEASE QUOTE PROMPTLY

DELIVERY REQUIRED BY:

ASAP

QUOTATION DUE BY

NLT 9/05/25 5pm EST

REQUISITION NO:

DEPT:

Distribution

QTY	DESCRIPTION
3000	<p><b>ECW PRI 00120</b></p> <p><b>QTY 3000 Ft</b></p> <p><b>WIRE 1/0 ALU, 15KV URD 3 CONDUCTOR, FULL</b></p> <p><b>#1/0 Aluminum, 15 kV - 133%,</b></p> <p><b>Ethylene Propylene Rubber (EPR) OR TR-XLPE Insulation Level,</b></p> <p><b>Full Concentric Neutral Cable with Overall Jacket</b></p> <p><b>Three (3) phases, paralleled per reel</b></p> <p><u><b>DELIVERY REQUIREMENT: SHIP FOB DESTINATION FREIGHT ALLOWED O</b></u></p> <p><b>BED RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL PROPOSALS RECEIVED IN RESPONSE TO THIS RFP OR TO TAKE OTHER ACTION CONSISTENT WITH THE BEST INTEREST OF BED. BED RESERVES THE RIGHT TO NEGOTIATE SEPARATELY WITH ANY SOURCE TO SERVE THE BEST INTEREST OF BED.</b></p> <p><u><b>EXCEPTIONS TO THIS RFP SHALL BE SUBMITTED IN WRITING &amp; ACCEPTED BY B.E.D. ON THE AWARDED P.O. TO BE BINDING. ALL SUBMITTED BIDS BECOME THE PROPERTY OF BURLINGTON ELECTRIC DEPARTMENT. AFTER THE AWARDING OF THE CONTRACT TO THE SUCCESSFUL BIDDER, ALL BIDS ARE OPEN FOR PUBLIC VIEWING.</b></u></p>

### VENDOR MUST COMPLETE THIS INFORMATION

- SHIPMENT CAN BE MADE \_\_\_\_\_ DAYS FROM RECEIPT OF ORDE
- F.O.B. DESTINATION FREIGHT ALLOWED BURLINGTON ELECTRIC DEPT. DOCK.
- TERMS \_\_\_\_\_ DISCOUNT OF \_\_\_\_\_% IF PAID NET \_\_\_\_\_ DAYS
- QUOTE VALID \_\_\_\_\_ DAYS

SIGNED \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_ COMPANY: \_\_\_\_\_

**B.E.D. RESERVES THE RIGHT TO ACCEPT OR DECLINE ANY AND ALL BIDS.**  
**ALL BIDS BECOME THE PROPERTY OF BURLINGTON ELECTRIC DEPARTMENT**

**Paul Charbonneau**

Director of Purchasing & Facilities

TO INQUIRE ON ABOVE QUOTE PLEASE CALL  
PURCHASING DEPARTMENT DIRECT AT:

**PAUL CHARBONNEAU 865-7456**  
**email: [pcharbonneau@burlingtonelectric.com](mailto:pcharbonneau@burlingtonelectric.com)**

**BURLINGTON ELECTRIC DEPARTMENT  
MATERIAL SPECIFICATION**

**#1/0 Aluminum, 15 kV - 133%,  
Ethylene Propylene Rubber (EPR) OR TR-XLPE Insulation Level,  
Full Concentric Neutral Cable with Overall Jacket  
Three (3) phases, paralleled per reel**

**SCOPE**

This specification covers single conductor, full concentric neutral, jacketed cables, for use on 13800 Grd Y/7970 volt, 60 hertz underground electrical distribution systems. These cables shall be capable of operating continuously in either wet or dry locations, whether conduit encased or directly buried in earth, at a conductor temperature of 105°C normal, 140°C emergency and 250°C short circuit duty.

Bidders must complete the "1/0 Aluminum, 15 kV, Full Concentric Neutral, Jacketed Cable Data Sheet" (page 6 of this specification) and return it with their quotation. BED will not consider quotations that are not accompanied by a completed "1/0 Aluminum, 15 kV, Full Concentric Neutral, Jacketed Cable Data Sheet."

**INDUSTRY STANDARDS**

The cable shall be in compliance with the latest edition of the applicable industry standards (listed below) except where this specification conflicts with the industry standards, in which case this specification shall take precedence. Specific exceptions to this specification or to applicable industry standards shall be clearly noted with each quotation.


AEIC CS-8	"Specification for Extruded Dielectric Shielded Power Cables Rated 5-46 KV"
ANSI/ICEA S-94-649	"Standard For Concentric Neutral Cables Rated 5-46 KV"
ANSI/ICEA T-32-645	"Guide for Establishing Compatibility of Sealed Conductor Filler Compound with Conducting Stress Control Material"
ANSI/ICEA T-31-610	"Test Method for Conducting Longitudinal Water Penetration Resistance Tests On Blocked Conductors"

**STANDARD CONSTRUCTION**

Stranded aluminum and filled conductor; extruded, semi-conducting, thermosetting conductor shield; thermosetting Ethylene Propylene Rubber (EPR) OR Tree-Retardant Cross-Linked Polyethylene (TR-XLPE) based insulation; extruded, semi-conducting, thermosetting insulation shield; bare copper concentric neutral wires; encapsulating linear low density polyethylene (LLDPE) jacket.

See the "Alternate Cable Construction" section on page 5 of this specification. Manufacturers are strongly encouraged to quote the standard and alternate cable constructions meeting this specification.

---

Material Specification	1/0 Aluminum, 15 kV - 133%, EPR Insulation,	Approved: 
# S0133	Full Concentric Neutral Cable with Overall Jacket	Date: 04/05/2022
Burlington Electric Department	(3) phases, paralleled per reel	Page 1 of 6

The conductor shield, the insulation and the insulation shield shall meet the electrical and dimensional requirements of the latest revisions of AEIC CS8 and ICEA S-94-649.

The conductor shield, the insulation and the insulation shield shall meet the requirements for voids, contaminants, protrusions, indents and irregularities of the latest revision of AEIC CS8.

The conductor shield, the insulation and the insulation shield shall be extruded and cured in a single pass (triple extruded).

### **CONDUCTOR**

One, 1/0, 19 strand, filled, class B concentric lay stranding, compressed aluminum conductor.

### **STRAND FILLING COMPOUND**

The interstices of the conductor shall be filled with a sealant to impede longitudinal water penetration; however, the outer surface of the conductor shall be free from the sealant compound. The sealant must be compatible with the conductor shield in accordance with the latest edition of ICEA T-32-645-1993.

### **CONDUCTOR SHIELD**

The conductor shield shall consist of a black, semi-conducting, thermosetting compound extruded over the conductor. This material shall be compatible with the conductor metal and the insulation, free stripping from the stranded conductor, and shall be uniformly and firmly bonded to the overlying insulation. The thermal characteristics of this material shall be equal to or better than those of the insulation.

### **INSULATION**

The insulation shall be a high quality, heat, moisture, ozone and corona-resistant thermosetting Ethylene Propylene Rubber (EPR) or Tree-Retardant Cross-Linked Polyethylene (TR-XLPE) based compound meeting the requirements of ICEA S-94-649 and AEIC CS8. It shall be contrasting in color from the extruded semi-conducting shields.

The nominal thickness of the insulation shall be 220 mils (133% insulation). In-plant repairs of the insulation are prohibited.

### **INSULATION SHIELD**

The insulation shield shall consist of a black, semi-conducting, thermosetting compound extruded over the insulation. This material shall be compatible with the insulation, the concentric neutral wires and the jacket material. The thermal characteristics of this material shall be equal to or better than those of the insulation.

The insulation shield shall bond to the insulation sufficiently to prevent trapping of moisture or air at the interface; however, the insulation shield shall be free stripping from the insulation, and the tension necessary to remove the insulation shall be 4 to 24 pounds per 0.5 inch width when tested in accordance with AEIC

CS8. The shield shall strip cleanly from the insulation, leaving it free of any significant residue of semiconducting or other material, which would have to be removed before splicing or terminating.

The outer surface of the insulation shield shall be smooth. It shall be conspicuously identified as semi-conducting in indelible non-conducting ink of a contrasting color along its entire length.

### **CONCENTRIC NEUTRAL**

Full rated neutral, helically applied, consisting of a minimum of six (16) No. 14 AWG annealed, bare copper wires, equally spaced, wrapped around the insulation shield. Alternate concentric neutral configurations (quantity and size of bare copper wires) with equivalent ampacity may be quoted.

### **JACKET**

An insulating, black, linear low density polyethylene jacket shall be extruded over the insulation shield and the concentric neutral wires. It shall comply with the physical requirements listed in ICEA S-94-649. Chlorinated jackets are not acceptable. The jacket shall have a nominal thickness of 50 mils. The jacket shall be free stripping from the insulation shield and the concentric neutral wires.

Three, equally spaced, longitudinal red stripes shall be extruded in the jacket.

The jacket shall be marked with the following information by means of surface or indent print with unmarked surfaces not exceeding six inches:

- 1) Manufacturer
- 2) Type of insulation (EPR OR TR-XLPE)
- 3) Size of conductor (1/0)
- 4) Conductor material (AL)
- 5) Rated voltage (15 kV)
- 6) Year of manufacture
- 7) Insulation thickness (220 mil)
- 8) Sequential footage marking

### **QUALITY ASSURANCE**

Each master reel from which cable is supplied shall be tested in accordance with AEIC CS8, ICEA S-94-649, and ICEA Publication T-32-645.

Certified test reports shall be furnished for all cable supplied to demonstrate accurate compliance with all required AEIC and ICEA production tests as listed in AEIC CS8. An X-Y plot of the Apparent Discharge Characteristic shall be included with the certified test reports.

## **REQUIRED INFORMATION**

In addition to price and delivery, the following information shall be provided by the manufacturer for each cable construction quoted:

- 1) Dielectric losses, in watts per foot, for the cable when operated at 13800 Grd Y/7970 volts.
- 2) Conductor diameter, diameter over the insulation, overall cable diameter, and cable weight per foot.
- 3) Warranty information.

## **SHIPMENT**

Water tight seals shall be applied to all cable ends to prevent the entrance of moisture during transit, outdoor storage or installation.

Cable shall be supplied three (3) phases, paralleled per reel.

All reels shall be non-returnable. The drum diameter shall not be less than 36 inches. Overall reel width shall not exceed 48 inches. Flange diameter shall not exceed 72 inches.

Reels shall be labeled as specified in AEIC CS8, with the exception that durable labels will be securely attached to both flanges of the reel.

When the length of cable on each reel is specified by the Burlington Electric Department, the tolerance shall be minus zero to plus five percent (-0% / +5%).

## **WARRANTY**

All cable under this specification shall be quoted with a forty (40) year replacement warranty.

## **ALTERNATE CABLE CONSTRUCTION**

Manufacturers should also quote a cable construction with longitudinal water blocking around the concentric neutral wires as an alternate. BED will evaluate all quotations received.

### **CONSTRUCTIONS**

Stranded and filled aluminum conductor; extruded, semi-conducting, thermosetting conductor shield; EPR or TR-XLPE based insulation; extruded, semi-conducting, thermosetting insulation shield; longitudinally water blocked, bare copper concentric neutral wires; encapsulating linear low density polyethylene (LLDPE) jacket.

### **CONDUCTOR**

One, 1/0, 19 strand, filled, class B concentric lay stranding, compressed aluminum conductor.


### **LONGITUDINAL WATER BARRIER**

A longitudinal water barrier, consisting of a dusting of water swellable powder and/or a water swellable tape, shall be applied over the neutral wires. The water swellable powder / tape shall be compatible with the insulation shield, the concentric neutral wires, and the jacket material.

### **QUALITY ASSURANCE**

In addition to the tests listed on page 3 of this specification, after jacketing, strand filled and longitudinally water blocked cables shall also be subjected to a water penetration test in accordance with ANSI/ICEA T-31-610. The certified test reports shall also demonstrate accurate compliance with the water penetration test.

---

Material Specification	1/0 Aluminum, 15 kV - 133%, EPR Insulation,	Approved: 
# S0133	Full Concentric Neutral Cable with Overall Jacket	Date: 04/05/2022
Burlington Electric Department	(3) phases, paralleled per reel	Page 5 of 6

**BURLINGTON ELECTRIC DEPARTMENT**  
**1/0 Aluminum, 15 kV, EPR, Full Concentric Neutral, Jacketed Cable Data Sheet, (3) phases,**  
**paralleled per reel**

Vendor: \_\_\_\_\_ Quotation Date: \_\_\_\_\_

Cable manufacturer: \_\_\_\_\_

\*\*\* BED will not consider quotations that are not accompanied by a completed copy of this sheet. \*\*\*

	Standard strand filled Cable Construction	Strand filled conductor and longitudinally water blocked
Product or Catalog Number		
Price per Foot		
Delivery (Weeks)		
Minimum Order (Feet)		
Warranty Period		
Conductor Diameter (inches)		
Type of Insulation		
Diameter Over Insulation (inches)		
Overall Cable Diameter (inches)		
Cable Weight (pounds per foot)		
Dielectric Losses when operated at 13800 Grd Y/7970 volts (watts per foot)		

Exceptions to this specification: \_\_\_\_\_


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Material Specification  
# S0133  
Burlington Electric Department

1/0 Aluminum, 15 kV - 133%, EPR Insulation,  
Full Concentric Neutral Cable with Overall Jacket  
(3) phases, paralleled per reel

Approved:   
Date: 04/05/2022  
Page 6 of 6

**TERMS and CONDITIONS**

1. These Terms and Conditions, together with the purchase order and/or contract issued by the Burlington Electric Department's (B.E.D.) Purchasing Office, constitute the entire agreement between B.E.D. and the supplier/contractor. Any modification to said agreement shall be submitted in writing by the party seeking said modification, to the other party. Said modification shall be agreed upon in writing by both parties in order for it to be enforceable. Absent said written modification, this form and said purchase order shall exclusively control the terms of the agreement between the parties.
2. Except as herein provided, no purchases ordered by unauthorized individuals shall be enforceable against B.E.D. Only individuals expressly designated as those vested with the authority to purchase on behalf of B.E.D. shall be considered persons possessing binding purchasing authority. Agreements entered into with unauthorized individuals shall be void and B.E.D. shall not be liable for any such unauthorized agreements.
3. Sellers, suppliers and contractors shall not assign, delegate, transfer, convey, sublet, or otherwise dispose of their rights, titles, interests or obligations under this contract, or their power to execute such contract to any other person, firm or corporation, without the previous written consent of B.E.D.'s Purchasing Office.
4. The parties to this agreement hereby agree that this contract is subject to the laws of the State of Vermont. The parties to this agreement further agree that Vermont's version of the Uniform Commercial Code, found in Title 9A of Vermont Statutes Annotated, shall apply.
5. B.E.D. may return any materials which are defective, unsatisfactory, or of inferior quality or workmanship, or fail to meet specifications or other requirements of this order.
6. B.E.D. reserves the right to cancel this order if goods are not shipped as directed. B.E.D. reserves the right to terminate its obligations under this order or any part hereof if any delivery/awarded service is not made in the time provided or, if no time is specified, within a reasonable time or if the material that is delivered/service provided is not as specified.
7. Seller shall ship in accordance with any instructions from B.E.D. and the requirements of common carriers to secure the lowest transportation costs. No shipments are to be made C.O.D., nor shall any such shipments be accepted. When goods or materials are shipped F.O.B. point of shipment, all freight charges are to be PREPAID by the Seller and added to the invoice total. An original copy of paid express or freight bill shall be attached to the invoice.
8. Seller shall furnish a packing slip with all shipments showing the purchase order number, seller name, catalog numbers, quantities (including back orders) and a full description of materials shipped.
9. Contractor shall furnish current Certificate of Insurance as outlined by B.E.D.'s Insurance Requirement Contractor's Order, a copy of which will be provided by B.E.D.'s Purchasing Office to the Seller. Such evidence of insurance shall be received at B.E.D. before the commencement of work, or Purchase Order and/or Contract is awarded, whichever is sooner, and such insurance shall be maintained throughout the duration of awarded contract. Seller shall be liable for any and/or all damages/claims (including but not limited to bodily/personal injury, property damage, loss of income, business interruption, or wrongful death), while performing or as a result of work assigned/related to the awarded contract.
10. The contractor shall be responsible for ensuring that all utilities are properly located, marked and identified through utilization of, and compliance with, the requirements of the "Dig Safe" program (30 V.S.A. §7001 et seq. and Vermont P.S.B. Rule 3.800). Contractor is responsible for working around existing utilities and agrees to indemnify and hold B.E.D. harmless for any damages to such utilities except for such damages whose sole proximate cause is due to negligence by B.E.D.
11. Seller shall follow all B.E.D. Safety Rules, a copy of which shall be provided, as well as follow good utility practices on details not covered in specification documents with preference given to B.E.D. Standard practices if suitable. Seller is responsible for following all applicable EPA/VOSHA/OSHA/NESC and NEC rules and regulations.
12. When the contract is awarded to provide services, the cost of service shall be a fixed fee or a time and material basis with a Not To Exceed amount. Expenses shall be billed at cost unless otherwise specified on the awarded contract. Seller shall furnish an invoice detailing Purchase Order number, scope of work, mileage and other expenses. If the contract is awarded on a time and material basis, the invoice shall also include dates worked, name of personnel, number of labor hours worked (traveled if chargeable), rate per hour and total labor, equipment rental hours and rates and materials. Seller shall be responsible to obtain all necessary permits and copies shall be furnished with each invoice. Seller shall also furnish documentation of all reimbursable expenses with each invoice.
13. Unless otherwise specified, payments shall be made on partial deliveries accepted by B.E.D. when the amount due on such deliveries so warrants. Progressive billing for services rendered shall be accepted unless fixed fee is quoted. Where there is a question of non-performance involved, payment in whole or part against which to charge back any adjustment required, shall be withheld. In the event cash discount is involved, the withholding of payment as provided herein shall not deprive B.E.D. from taking such discount.
14. In accordance with city regulations, invoices for completed purchase orders must be received by B.E.D.'s Accounts Payable by the 27th of each month to assure payment by approximately the 15th of the following month. Invoices received after that date shall be carried forward to the following month.
15. **All invoices shall be mailed to the ATTENTION of B.E.D.'s Accounts Payable.** Inquiries regarding the status of unpaid invoices shall likewise be directed to B.E.D.'s Accounts Payable.